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## Budgetary Proposals

**V**IEWPOINTS almost diametrically opposed were embodied in the proposals for the Budget put forward last week by the Trades Union Congress and the Federation of British Industries. The T.U.C. has recognised the disincentive effect of high taxation, though it applies this principle only in narrowing the gap between the reduced and standard rates of income tax; the disincentive to the investor or potential investor is ignored. Again, whilst the T.U.C. accepts reduction of Government expenditure, the only action called for is administrative economies; it is hard to see how any such economies could fail seriously to affect the present level of social services, raising of which is a fundamental of Labour policy. The other suggestions show little change in the usual T.U.C. attitude. Profits tax and food subsidies are to be increased—(with what economic consequences it is not explained)—and purchase tax re-adjusted, with exemption of certain essential commodities and a higher incidence on luxuries; the last proposal must inevitably result in reduced revenue. The T.U.C. proposals doubtless are intended for the eyes and ears of trades union members, on whom the Congress failed last year to impose its policy of wage restraint. It is with a view partly to appeasing its followers and partly to mitigating the effects on the national economy of lack of wage restraint, that the T.U.C. has given the Government economic counsels of despair. Where, however, the T.U.C. considers additional taxation inevitable, the F.B.I. thinks that re-armament can be financed very largely out

of Government saving, by administrative economies, by postponement of some social services, and by taking local Government loans out of the Budget and finding the money in local revenue or by normal borrowing; the last proposal is controversial, and even postponement of social services, without reduction of those now enjoyed, would be highly unpopular. The other F.B.I. proposals such as abolition of profits tax (with an alternative suggestion as to preference dividends as a charge in computing profits), removal of discriminatory taxation on corporate bodies and spreading taxation over the general body of taxpayers, and the countering of "inflationary pressure by drawing off surplus purchasing power where it lies," are economically sound enough. It is questionable however if they could ever be politically acceptable, whatever the Government in power.

## Mr. A. H. Peppercorn

**T**HE death on March 3 of Arthur Henry Peppercorn, the last Chief Mechanical Engineer of the London & North Eastern Railway, robs the railway mechanical engineering world of a lovable personality and of a disciple of the late Sir Nigel Gresley, bred in the best Doncaster traditions. The details of his career, given elsewhere in this issue, show that after working his way up from apprenticeship under another great G.N.R. mechanical engineer, H. A. Ivatt, he was appointed to the premier position in his profession on the L.N.E.R. not only (in 1946) in the still abnormal conditions of war, but also when the great upheaval of nationalisation was impending, with consequent centralisation on the Railway Executive of the highest mechanical engineer functions. Even so, Peppercorn was able to develop the ideas in locomotive design of Gresley and of his successor, Mr. Edward Thompson. It was his fate, however, to be in command in an abnormal and transitional era, so that his scope was much restricted; but the proof of his efficiency is the work performed in difficult conditions of maintenance by the motive power in his charge, and the remarkably good condition—again in the most difficult circumstances—of the locomotives and rolling stock which he handed over to the nationalised railway system.

## Mr. Edgar Alcock

**T**HE doyen of the British locomotive building industry died on March 2: fittingly Mr. Edgar Alcock could be numbered among the half-dozen giants of the industry during this century. He was a "Lanky" man by training and was at Horwich in its palmiest days; later, as an outdoor assistant to the C.M.E., he was in constant contact with such men as H. A. Hoy, Nigel Gresley, Henry Fowler, Oliver Winder and J. P. Crouch. It was his quite exceptional works talent that led to his selection as Hunslet's works manager in 1912, and he quickly brought that company's works practice up to the top flight. The original improvements done, Alcock's general business ability, energy and high integrity were more and more appreciated by the Campbell family, who had controlled Hunslet since 1864, and when the last active member, Mr. Alec Campbell, died in 1941, Alcock, then Managing Director, succeeded him as Chairman. Despite the fact that Hunslet is not one of the largest builders, he took a leading part in the activities of the Locomotive Manufacturers' Association, and for many years was one of the leading negotiators of the industry. His unclouded judgment, allied with a frank and ruthless pushing aside of irrelevant details, was appreciated not only by the industry and by government circles, but by labour, with which he had a long record of successful handling.

## Resignation of Argentine Transport Officials

**I**N the midst of a series of strikes on the Argentine railways came the news of the resignation of Colonel Castro, the Minister of Transport, his immediate collaborators, and the general managers of the railways. Colonel Castro headed this Ministry and its predecessor.

the Transport Secretariat, since July, 1948. The names of the new Minister and those of the new managers so far announced are given elsewhere in this issue. The ministerial officials concerned include those who negotiated the settlement of the strike in December, when a new wage scale for all railwaymen was approved. Almost as soon as he took office, Mr. Maggi, the new Minister of Transport, faced a new strike called by the Railway Workers' Emergency Consultative Committee, which ceased only when President Peron issued a decree mobilising the railwaymen in Buenos Aires and suburbs, and told the unions that wage claims had been met to the extent that the railways were losing "a thousand million pesos." This drastic measure had its effect, and services are at present normal, while the strike, stated to be part of a subversive plot, is being investigated. It will thus be seen that Mr. Maggi has taken on a heavy and unenviable task, to which he brings experience gained in the important provincial and national government posts which he has held since 1943.

### Overseas Railway Traffics

**D**URING the first month of 1951, both the Canadian National and the Canadian Pacific railways recorded a substantial advance in gross earnings, which considerably exceeded the accompanying increase in working expenses. The improvement in C.P.R. gross earnings amounted to £2,735,000 at £10,916,000, and, after taking into account a £1,618,000 advance in working expenses, net earnings were £469,000, as compared with £648,000 deficit in 1950. C.N.R. operating revenues at £15,636,000 were £3,955,000 higher than for January, last year, and net revenue, which had shown a £855,000 deficit, improved to £957,000. On February 23, aggregate gross receipts of the Paraguay Central Railway at G6,922,921, were G2,085,753 in advance of the 1949-50 result for the equivalent 34 weeks. Traffics for the two weeks ended February 23 were G80,415 and G56,528 higher, at G220,332 and G206,991, respectively. Midland Railway of Western Australia traffics for December showed an increase of £6,524 at £41,841, and since July 1 there has been an aggregate improvement by £58,067 to £235,223.

### I.U.R. Summer Meetings at Eastbourne

**E**ACH year, the various committees of the International Union of Railways meet in the early summer to consider proposals from their respective sub-committees and make recommendations for submission to the annual meeting of the board of management, which usually takes place, normally in Paris, the headquarters of the Union, towards the close of the year. At the annual board meeting held at Berne in November last, Sir Eustace Missenden, then Chairman of the Railway Executive, and a Vice-President of the Union, invited the administrations to hold their meetings this year in Great Britain, and Eastbourne was chosen as the venue. The choice is admirable from the point of view both of convenience and hotel accommodation. The meetings will be held from May 28 to June 9. There are five permanent committees of the Union, dealing respectively with passenger traffic; freight traffic; accounts, costs, and statistics; and operating and technical questions, and a special committee, covering the exchange of data between the European railways. Monsieur Lemaire, formerly Director-General of the French National Railways, is President of the Union. Previous meetings have been held in Brussels, Stockholm, Biarritz, Oslo, and Paris; the last meeting of the committees held in Great Britain was in 1933, in London.

### Punctuality

**I**T is often said that passengers would rather have slower trains which can be relied on to be on time than very fast but less reliable trains. But, although it is possible to tighten up schedules to the point at which punctual observance becomes difficult, there is no evidence that progressive easing of the demands made on the locomotives results in improved timekeeping. Before the war, the L.N.E.R.

streamliners and other high-speed services like the "Bristolian" and "Cheltenham Flyer" on the former G.W.R., though with schedules timed at speeds up to 70 m.p.h. and more from start to stop, had no superiors for "on time" running. Exceptional measures were taken, however, to ensure their punctuality. Today, with the booked times of long-distance trains much slower than pre-war, and, over most main lines, incorporating ample additional margins for the recovery of time lost by exceptional circumstances, timekeeping in general is at a low ebb in this country. While every allowance must be made for difficult conditions this may not be the whole story. Elsewhere in this issue a correspondent argues for a tightening of existing main-line schedules, and particularly for the abolition of recovery margins, which he considers with some reason to be responsible for not a little of the unpunctuality of today.

### Easter Train Services

**A**N early Easter, with its additional uncertainty of weather affecting holiday, and especially excursion, traffic, is always a commercial and operating problem for railways in this country. This year the difficulty is aggravated by a coal shortage, the degree of which in a fortnight's time is still uncertain. That some of the main-line trains hastily (and, as suggested recently in this journal, unnecessarily) withdrawn in deference to the Government wish for coal economy on the railways will be restored for the Easter holiday, as indicated elsewhere in this issue, was to be expected. There remain, however, the problems of services between Easter and the introduction of the summer services, and of the summer timetable itself, which are largely a matter of coal supply. One sacrifice which British Railways, unlike the road passenger transport industry, have had to make, is loss of traffic not only through enforced deterioration in services, but also through public uncertainty as to services offered, which might affect summer holiday travel. It is to be hoped that improvement in the coal situation will enable the Government soon to make a definite decision; this will allow the railways not only to regain the public goodwill they have been forced to lose, but also to resume the process of bringing their passenger services up to pre-war standards.

### Jubilee of Langen's Suspended Railway

**O**N March 1, 1901, the first section of the Barmen-Elberfeld suspended railway, carried along the course of the Wupper Valley in Germany by a system devised by Eugen Langen, was opened to public service. Although not adopted elsewhere this unusual railway offered advantages in that locality where the only practicable path for a new line was over the river. Its construction was commenced by a Nuremberg firm in 1898, and completed through between Vohwinkel and Barmen, about 8½ miles, in 1903, with stations at an average distance of 765 yd. and loop termini. Traction was by d.c. at 600 volts taken from a contact rail. The signalling was completely automatic, for a 1·8 min. headway on an intermittent contact system designed by F. Natalis. This had ingenious circuits, using colour light signals day and night, approach lighted, this being the earliest known example of such working. The system was described and illustrated in our issue of October 18, 1935. The difficulty of constructing and working points is a great disadvantage in the case of special systems such as Langen's or Lartigue's and militates against their adoption except where the route is a simple one. In 1919, when 17,400,000 passengers were handled, the company was re-formed. The working of the line has always been quite satisfactory.

### Southern Region Diesel-Electric Locomotives

**E**LSEWHERE in this issue is described and illustrated the first of three diesel-electric locomotives which are being built at the Ashford Works of the Southern Region of British Railways. The first of these locomotives recently has been completed and has carried out exten-

sive trials on the Southern Region. These locomotives were ordered as part of an extensive project envisaged by the former Southern Railway Company, details of which were given in 1946 by Sir Eustace Missenden, then General Manager, as reported in our November 8, 1946, issue. The proposals were not implemented at that time because of restriction in capital expenditure. The locomotives are designed for working the principal express services from Waterloo to the West of England and they will be capable also of operating on any other main-line routes of the Southern Region. The first of these locomotives was recently transferred to the London Midland Region, where it has been operating on various services, and it will be exhibited at the Festival of Britain. When the exhibition is over the locomotive will be returned to the London Midland Region for further working with main line trains.

### Defence and Dollar Exports

IT was clear when the Dollar Exports Board decided to hold its recent Convention that one of the primary questions to be raised at it would be the physical possibility of maintaining exports to the dollar areas in the light of the rearmament programme. Many industrialists found themselves in need of guidance as to the policy of the Government in this respect. By the time the Convention was held last week another very practical difficulty had arisen. The rising prices and increasing scarcity of many raw materials had reached almost famine conditions. Clearly, therefore, the greatest need before the delegates, who represented an important cross-section of Britain's trade and industry, was to elicit some practical advice and guidance from the several Ministers who attended some of the proceedings.

The Chancellor of the Exchequer, the President of the Board of Trade and the Minister of Supply all declared the desire and intention of the Government that trade with the dollar countries should continue on the highest possible plane. They warned, however, that almost certainly it would not be possible to look for a continuation of the recent upward trend in this trade, because of the demands which would be made by rearmament on raw materials, manpower and the productive resources of manufacturers. Nevertheless, they undertook that every endeavour would be made to maintain our position in dollar markets which had been won so hardily.

The Minister of Supply gave some general guidance as to raw material priorities. Defence orders would not get automatic priority, regardless of their consequences to other sections of British economy, but those responsible for executing such orders would have to have the raw materials available at the time—but not before—they were required. In many respects, apart from defence necessities, the allocation of scarce raw materials would have to be on the basis of conversion values. The higher the conversion value of the materials incorporated in the finished product, the greater the prospect of the manufacturer obtaining his raw materials. Mr. Strauss said that it had been decided that, normally, the qualifying conversion factor in the case of exports to dollar areas or sterling commonwealth countries would have to be at least fifteen times the value of the copper, zinc or alloys contained in the product, and in the case of other countries a minimum of fifty times. The representatives of industry listening to the Minister obviously were relieved to hear that he did not contemplate establishing an elaborate system of Government allocation and control but would rely on industry to do the job under general guidance.

It was also made clear, however, that, in fostering both dollar exports and defence needs, care would have to be taken of the many Commonwealth countries which have always relied on us for their essential industrial requirements. These are traditional markets dependent on Great Britain for part of, or all, their supply, particularly in a time of world shortage.

The Convention had opportunities of hearing from

many prominent industrialists of the steps which they had taken, and the success which had attended them, in their endeavours to promote trade in the dollar areas. Sir George Nelson gave many illustrations of the opportunities which exist for selling capital goods in Canada. He was speaking in particular in relation to the British electrical industry as a whole, and he gave an account of a world tour he had recently undertaken. Before setting out, he had obtained assurances from the authorities that deliveries for material for heavy plant, including railway transport equipment, would be on a footing comparable with defence materials. There had been no major change in that position, but he felt that there was a need for complete clarity by the Government to industry on the acceptance of export orders for the dollar areas and for the Commonwealth in the light of the defence programme.

Mr. J. L. S. Steel pointed out also during the Convention that dollar markets were not confined to the United States and Canada but included the dollar account countries bordering on the Caribbean Sea from Mexico in the north through Central America to Colombia and Venezuela in the north of South America.

British railway equipment is well suited to the dollar export drive, not only because of its high conversion factor in most cases, but also because of its outstanding international reputation. To many of the dollar area countries mentioned by Mr. Steel, British railway equipment is an important import; the contract placed by Canada for British railway signalling equipment, which is reported on another page, shows what can be achieved in North America.

### Railway Wages: the Aftermath

THE consequences of the recent wages agreement between the Railway Executive and the three railway trades unions have still to make themselves known, and whatever the exact form they take, are bound to be far-reaching. How well this is understood by the unions is not clear. Credit is due to Mr. H. W. Franklin, National President of the N.U.R., for his grave warning in last week's issue of *The Railway Review* on the implications of the agreement regarding manpower economy, which will make great demands on the railwaymen; in the same issue, Mr. J. B. Figgins, General Secretary of the union, is triumphant at "overturning for the first time . . . the recommendations of a court of inquiry"—though he speaks of Mr. John Elliot as a Chairman of the Railway Executive likely "to win the maximum co-operation not only of the unions but of the staff of the Railway Executive." Little attention seems to be paid by union leaders to the indirect consequences to railwaymen of the loss of traffic which will result from rate and fare increases.

The national Press as a whole has appraised the situation soberly. Thus *The Times* in a recent leading article was representative of enlightened lay opinion in assessing the seriousness of the threat to strike and the folly of inter-union rivalry and lack of co-ordination; whilst railway employees, it was argued, admittedly have been underpaid, the increased wages must be earned. *The Times* rightly pointed out that the present settlement is only the beginning of the matter, and that the question how to find the money for the wage increases has not been answered. A later issue elaborates this, citing the 16½ per cent. freight rate increases of last May as a precedent; further rate increases, it is stated, if confined to freight, would have to be of the same order to raise the £30 million a year to cover increased wages and other increased outgoings. If passenger fares, it is suggested, are to make any serious contribution to an increase in revenue, the increases must be in obligatory (i.e., season ticket, and so on) rather than in voluntary travel. This latter suggestion is impracticable, not least because the public, if faced with what it considers intolerably high railway fares, will contrive somehow to avoid rail travel—and the road passenger transport industry would certainly do its best to oblige the public in such a case.

In the remainder of the press, there is a tendency to over-estimate the economies—"ruthless" is a favourite word)—by which the Railway Executive could cut its expenses. It is often forgotten that economies (not so much ruthless as with a regard for their effect on services to railway users) were closely studied and practised by the railway companies between the wars and up to nationalisation, and have been by British Railways since then. The loudly advocated closing of branch lines is being effected—with surprisingly small resultant economies. Little more can be expected from measures of this kind pending transport integration, which is primarily a matter for the British Transport Commission. Meanwhile the greatest economies can result from better use of railway manpower and greater output by the railwaymen, and this matter at least is in hand.

The question of British Railways finances is squarely faced by *The Economist*, which in a recent article calls for a public inquiry into freight rates; this, it is suggested, would embarrass the B.T.C., which hoped to present the first of its charges schemes later this year. "The creation," continues the article, "of a logical pattern of railway and road charges has been frustrated at each stage by the discovery that costs have increased faster than have revenues."

The article asks if integration of transport now has any meaning, with the present instability of costs and the unwillingness of some transport employees (evinced in the recent unofficial strikes in London) to face the consequences of integration; it maintains, however, that the Transport Act, 1947, must stay, if only for the lack of outside bidders for the railways and much long-distance road haulage, and integration of some sort—not subsidisation—is the only solution. An editorial in the same issue emphasises the deplorable consequences of Ministerial interference in the wage negotiations, to which we referred last week. "With wage questions occupying the crucial place," it states with some justification, "... the Minister of Labour ... may well become ... a sort of grand co-ordinator for the affairs of the nationalised industries."

These are sobering reflections, and in addition to the recent wage increases for members of the three unions, an award to railway shopmen costing £3 million a year (as stated elsewhere in this issue) was made earlier this week. There is nevertheless a brighter side. No time has been lost in setting up the "efficiency committee" (the special joint committee of Railway Executive and union delegates), as agreed on February 23, to improve productivity and eliminate waste of manpower, and its first meeting early this week was a good augury of further co-operation in making the best of the situation.

### Automatic Couplings on European Railways

ASKED by the Inland Transport Committee of the Economic Commission for Europe to resume its investigations into the question of equipping all European rolling stock with automatic couplings, the International Union of Railways has issued a summary\* of its study of this question from 1924 to date. The three main considerations were: (a) safety of staff, (b) technical possibilities, and (c) economic implications. From the safety point of view, an attempt was made to assess the accidents attributable to the existing screw-coupling and side-buffer connection between vehicles, and the proportion that would be avoided by providing automatic couplings. Statistics of fatal accidents only were found to be suitable, and these were compared with corresponding figures for American railways. For a normal pre-war period, comparative figures showed that an annual average of 53 out of every 140 fatal accidents during coupling operations in Europe would have been avoided had the American coupler been employed by European railways.

It was realised, however—and the reports stressed the fact—that the American automatic coupler did not obviate

the necessity for men to go between vehicles to couple and uncouple brake and heating pipe connections. The Union therefore decided that, though the American coupler might improve the position in Europe, any coupling adopted by European railways must involve less risk to staff. Moreover, the great differences in the numbers of fatal coupling accidents reported by various European railways indicated that a considerable reduction of accidents with screw couplings might be effected.

Two main types of coupling were considered: (a) the buffing-coupler transmitting both tractive and compressive efforts, and (b) the automatic draw coupling transmitting tractive effort only. Though (b) would be much the cheaper, as it requires no strengthening of the underframe, and involves insignificant additional weight of stock, (a) was finally selected as safer for the staff, with better running on curves. The change-over from screw to automatic coupling, it was felt, must be effected in two main stages. In the first, a transitional automatic draw coupling must be fitted to the screw-coupling drawgear of existing vehicles, side buffers being retained for the time being. This comparatively light coupling could be fitted simultaneously to all vehicles throughout Europe within a couple of days, if the stock were prepared beforehand. In the second stage the final buffing-coupler—which must fit the transition coupling—would replace the latter as rapidly as finances permitted. The side buffers would be removed only when every vehicle had been fitted with the final coupler. Both the transitional and final couplings must include the automatic coupling of brake pipes; and it was recommended that electric and heating connections should also be coupled up automatically.

Railway administrations were invited to submit details of transitional and final couplings, and if these are approved by the Union, they are circulated to all administrations for report as to whether they can be fitted to their stock without difficulty. From the replies received, decisions are taken as to whether or not the various types shall undergo: (1) special trials to test the general efficacy of each type, conducted on the railway submitting the design; and (2) running service trials, carried out on three permanently-selected railways. Vehicles to be tested must be of various types, with and without strengthened underframes and vestibule connections, and having maximum, average, and minimum buffer heights. All combinations of these varieties must be tested. Running service trials over the period of one year must show that dust, moisture, frost and icing have no influence on the coupling, that it is capable of resisting all normal strains in service, that wear is not excessive, and that it is always easy to operate and certain in its action.

After agreeing that the fitting of automatic couplings would reduce accidents, the Union arrived at the conclusion in 1936 that none of the transitional systems so far examined produced a saving comparable with the high outlay involved. The automatic coupler would entail additional annual expenditure greatly in excess of the economies which might be expected from building new vehicles.

This was the position until 1948, when the Inland Transport Committee requested the Union to bring up to date earlier investigation reports on the subject. In compliance, the Union decided to retain the previous safety argument and system governing the technical construction and trials. The economic situation, however, has changed considerably in view of the additional railways expected to participate in the scheme. Moreover, the average life of a vehicle is now taken as 40 instead of 30 years, so that the period over which the change-over is spread, which is half the average amortisation period for wagons, is assessed at 20 years.

It is now estimated that, allowing for the economies that will accrue, the net cost of equipping all European rolling stock would total \$4,448.6 million, and that 4,960 million man-hours and 6 million tons of steel would be involved in equipping the 3,303,000 vehicles with automatic couplers, including brake-pipe connections. The gross outlay, spread unevenly over the 20 years, is calculated as some \$6,000 million, or \$2,000 a vehicle.

\* Published in the September-October, 1950, issue of the *Bulletin of the International Union of Railways*

## Passenger Progress on U.S.A. Railways

ON October 28 our American contemporary, the *Railway Age*, published its annual "Passenger Progress" number. On this occasion the theme is not merely the happenings of the previous twelve months, but a stock-taking of developments in passenger business since 1900. An excellent series of reproductions of photographs contrasts the crack trains of the principal railways 50 years ago with the streamline expresses of today and proves, according to an editorial, that "in functional beauty, in comfort and in public appeal, the modern passenger train need bow to nothing in this world." The modern train is equipped in a way never dreamed of in 1900, as well as being faster and safer, while the price of travel is lower in relation to the cost of living and the purchasing power of the dollar.

The extraordinary thing is that, in spite of all improvements in rail travel, the number of passengers carried in 1949 was slightly less than the 1900 number, when the population of the States was roughly half what it is now. The average length of journey has increased, so that passenger miles in 1949 were 119 per cent. more than in 1900. The *Railway Age* argues that today "the total service rendered is as important, *per capita*, as ever." That is poor consolation, because in 1920 the railways carried more than twice the number of passengers entrained in 1900 and worked nearly three times the number of passenger miles.

Since 1920 the decline in passengers, passenger miles and passenger revenue has been catastrophic, as shown in the table below.

Year	Passengers (millions)	Passenger miles (millions)	Passenger revenue (millions)
1921	1,035	37,312	\$ 1,163
1929	780	31,074	872
1939	450	22,651	416
1949	554	35,095	860

Over the period of 28 years from 1921 to 1949, passengers were 46 per cent. fewer, passenger miles nearly 6 per cent. less and passenger revenue down 26 per cent. During the first eight months of 1950 passenger revenue was 10 per cent. below the 1949 level. The fall was arrested in September by heavy bookings on Government account, but it will be a sad state of affairs if the railways come to depend for traffic on war preparations.

The main advance in passenger schedules during the 12 months to October was the running of 16 new streamline trains. These brought the total number of streamliners in service to 154, made up of 319 sets of rolling stock. As passenger trains were run on 156,900 route-miles of line, there is barely one streamliner for every 1,000 miles of first track, and it attracts attention because it is quite unlike the average ordinary train. We are told that the main-line coach of today is built of alloy steel or aluminium, is 85 ft. long, weighs from 62 to 68 tons and seats 44 to 60 passengers; plumbing, lighting and air-conditioning are up to the standard of a modern hotel. Only a small proportion of the 44,115 passenger train coaches in use can come up to that description. At January last, 7,675 cars (17.4 per cent.) were less than 16 years of age, while 16,625 (38 per cent.) were over 30 years old.

Possibly British Railways have done as much since 1947 to replenish their stock of some 56,500 coaching vehicles as the U.S.A. railways have effected. The numbers of new vehicles put into service in 1948, 1949, and 1950 to September were:—

	British Railways	U.S.A. Lines
1948	1,330	891
1949	1,800	933
1950 (to September)	1,788	781
Total	4,918	2,605

In comparing the figures, allowance should be made for the greater size, weight and elaborate equipment of many American vehicles. The U.S.A. railways operate 5,850

sleeping cars, 1,800 restaurant cars, and over 900 parlour cars. British Railways work only 375 sleeping cars, 680 restaurant cars and a number of Pullman trains, but own very few vehicles which can be termed parlour cars. In the States individual railways strive for novelty of design in new trains and place orders in a rather spasmodic way with outside contractors, as a general rule. British Railways aim at utility and uniformity of design, with a carriage building programme framed to keep their own workshops steadily employed and leave a fair amount of work for outside builders.

A similar difference in the system of providing motive power made possible the triumph of the diesel-electric locomotive, which now dominates passenger train running on the U.S.A. railways. Over 50 per cent. of all passenger locomotive miles and 60 per cent. of passenger train car miles are worked by diesel-electrics. The New Haven Railroad advertises in this *Railway Age* annual that it has diesel or all-electric power on 96 per cent. of its system and will dispense with steam power altogether before the end of 1951. That is a remarkable announcement to come from a railway which operates nearly 1,800 route-miles in the highly industrialised area of Southern New England, with an unusually heavy passenger business, and has a long experience of all-electric working. The enterprise and skill of diesel engine builders has revolutionised motive power in the space of 15 years. One firm, full of "push and go," says that its all-stainless steel rail diesel car, now one year old, is "1950's most important development in passenger progress"!

## New Zealand Government Railways

THE report for the year ended March 31, 1950, of the New Zealand Government Railways records a record gross revenue of £19.5 million, of which £3 million was derived from subsidiary services (mainly road motor, also catering, lake steamers, and so on). A slight increase in passenger revenue was caused mainly by restoration of daily running of the "Auckland-Wellington Limited" and Christchurch-Invercargill expresses, resulting in increased first class and sleeping berth travel. The greater part of the increased gross revenue, however, came from the increases in tonnage conveyed and in average length of haul.

Some of the more important results are given below:—

	1948-49	1949-50
	(Millions)	
Passenger journeys	26.2	25.9
Goods tonnage conveyed	9.7	9.9
Total train-mileage (revenue)	13.9	14.4
	(£ millions)	
Coaching traffic earnings	3.3	3.3
Goods traffic earnings	11.7	12.4
Total operating revenue	15.3	16.1
Net operating loss	1.4	1.3

Regarding the losses sustained in this and previous years, the Minister of Railways, the Hon. W. S. Goosman, announces in the Railways Statement the present Government's intention that the railways shall be made to pay the cost of operation and also make a reasonable contribution towards interest on railway capital. Goods rates therefore were increased as from May, 1950; ordinary passenger fares were not raised, as they had been raised 14 per cent. in September, 1947, but exemption of suburban season and excursion tickets from the 1947 increase was lifted. The Dominion, states Mr. Goosman, depends on the railways for services which cannot or would not be performed by other means of transport, but the railways' ability to perform such services depends on their retention of more lucrative traffics sought by competitors. This, he continues, means that where the railways can provide such service as may reasonably be required, then they should not be subjected to uneconomic competition. The gross ton-mileage of goods is expected to rise some 50 per cent. in the next ten years, and various improvements are being effected so as to cope with the additional traffic as it occurs.

Electrification of the Wellington suburban lines, continues the Minister, is being pushed ahead, and electric multiple-unit stock so far received from Britain, built by The English Electric Co. Ltd., has been placed in service on the existing electrified Wellington suburban line. The report of Sir

William Halcrow and Mr. J. P. Thomas on transport generally in and around Auckland is under consideration. The General Manager, Mr. F. W. Aickin, recently reported specially on dieselisation of shunting power, on diesel-electric operation, and on electrification of the North Island Main Trunk line, of all of which he was generally in favour: his report has been under consideration by the Government.

In his report to the Minister, Mr. Aickin mentions difficult operating conditions caused by shortage of staff and goods vehicles and deterioration in engine power. Road competition made itself felt in the continued decrease in sheep traffic. The "30-mile restriction" on road transport did not protect the railway to the extent generally supposed, as the licensing authority granted many exceptions, against which there is no appeal. Regarding estimated future traffic increases, whilst goods wagons can be imported from abroad, Mr. Aickin considers that staff and locomotive shortages can be met by the changes in motive power mentioned above, which will reduce the operating staff required and also improve passenger schedules.

Staff shortage was a great handicap in rendering efficient service and was still causing considerable concern. Every branch was seriously depleted, which had necessitated the working of long hours over a period of years, with a consequent strain on the older men. Various measures were adopted and are being explored to provide some relief, among which are extensive advertising, immigration, and endeavours to augment housing and accommodation facilities for staff. The total deficiency was 3,600 (nearly 15 per cent. of the whole) on March 31, 1950, and still rising. Payment of heavy overtime rates for work which should normally be done in shifts added greatly to operating expenses.

## New Railways to African Coal Mines

(From a Correspondent)

IF the extent of the deposits and the quality of the coal prove satisfactory, two coalfields in Southern Africa now being investigated may exert considerable influence on future railway construction in East and Central Africa. Of the systems south of the Sahara only those of South Africa north of the Orange River, the Rhodesias, Nyasaland, Mozambique south and west of the Zambezi and Shire rivers, and Nigeria have reasonably good access to mines which produce coal suitable for locomotive fuel. Even in the more favoured territories a long haul is involved to supply the needs of sections of railway far from the coal deposits, such as the greater part of the Cape Province, South West Africa, the northern part of Northern Rhodesia (including the copper belt), the Katanga Province of the Belgian Congo and the Benguela Railway in Angola; to some of these supplies can be more readily transported by sea. The railways of British East Africa at present are without any worked local deposits of fuel; whether coal or oil is used it has to be brought long distances by sea.

The two new coalfields which may radically alter this state of affairs are situated near Songea, in the Southern Province of Tanganyika, and in Northern Rhodesia, about 30 miles from the Cape-Congo railway and almost midway between the Wankie Colliery, south of the Zambezi, and the copper belt. It may be some time before the value of these discoveries can be adequately assessed, but both will be of great potential importance if they should turn out to be sound mining propositions.

The Songea deposits are believed to offer better promise of being suitable for locomotives than the earlier discoveries of coal in Tanganyika. Although considerable quantities were found, the coal is very friable and of poor steam-raising quality. When trials were made on the Tanganyika Central line some years ago, it was found that in addition to the normal full tender it was necessary to haul an extra wagon load behind the tender to enable the locomotive to complete the usual distance between refuelling points. To make effective use of such coal it would have to be burned

either in electric power stations at the mine or possibly used for the production of oil fuel. Should the Songea coalfield contain coal suitable for locomotives, it will be a strong reason not only for moving further inland the railhead of the newly-built Southern Province line from the coast, which now terminates at Nachingwea, about 130 miles from the sea, but also for linking this railway with the projected trunk line to connect the Tanganyika Central line with the Cape-Congo route. Songea is about 250 miles from the present railhead of the Southern Province line from Mikindani, where a port is being constructed. As recorded in the February 16 issue, approval has been given to a 60-mile extension of this line, in connection with a new development scheme for the area.

The still more recent discovery in Northern Rhodesia is 28 miles by road from Chisakesi Siding and about 50 miles south of the Kafue Bridge. A borehole reached a seam  $4\frac{1}{2}$  ft. thick at a depth of 624 ft. and samples of toe coal were sent for analysis to Johannesburg. This showed a high ash content, as did coal deposits in Tanganyika discovered before the seams near Songea, from which it is hoped to obtain better results. Only one borehole has yet been sunk in the Northern Rhodesian region, which is between 50 and 60 miles long with an average width of four miles and is reported to contain 19 seams more than 3 ft. thick in addition to more than a hundred with thicknesses ranging between 1 ft. and 3 ft. Much more boring will be needed to show whether this Northern Rhodesian coalfield is worth developing. The site of the first borehole is about only 100 miles from Lusaka, the capital of Northern Rhodesia, assuming that a branch line 30 miles long would be required to connect it with the main Cape-Congo railway. It is still closer to the tobacco growing district of Choma. The distance to the nearer end of the copper belt would be only about three-fifths of the mileage over which Wankie coal is now hauled.

As with the Songea coalfield, everything depends on the result of more complete investigations as to the extent and quality of the deposit, but if this proves satisfactory, the consequences may be far-reaching. The existence of a source of coal for the Northern Rhodesian and Katanga base metal mines and for locomotive fuel near the Kafue river and more or less on the line of the projected Sinoia-Kafue cut-off (which would shorten the distance between the port of Beira and the copper belt by more than 500 miles) would have a strong bearing on the prospects of early construction of this link. The management of the Rhodesia Railways hitherto has opposed the building of the cut-off on the ground that as coal had to be hauled from Wankie to the mines, it was preferable to work traffic over this roundabout route rather than incur the additional capital charges involved in shortening the route, with the attendant loss of mileage and its possible influence on rates. If the north-bound coal traffic from Wankie is displaced by the opening of a mine nearer to the copper belt, the operating expediency argument in favour of taking the northern traffic round three sides of a square will be greatly weakened.

In Nyasaland, coal deposits, the value of which has still to be determined, have been discovered near Livingstonia in the Vipya Mountains to the west of the northern part of Lake Nyasa, at an altitude of about 3,000 ft. above the lake. The Nyasaland Government is awaiting a report from Powell, Duffryn Limited which should indicate if the prospects are sufficiently good to justify a full investigation by means of further borings and possibly the sinking of a shaft. The site is remote from centres of consumption, but if further exploratory work gives encouraging results, it might be practicable to convey the coal by ropeway to the lake and transport it in barges to Chipoka, the lake terminal of Nyasaland Railways, about 140 miles north of Blantyre, the chief commercial centre of Nyasaland. The nearest existing source of coal for Nyasaland Railways is the colliery near Tete in Portuguese territory, with a rail haul of about 300 miles to Blantyre. If the Livingstonia coal is to be suitable for locomotives and can be readily mined, it might compete economically with that from Tete, at any rate in the central and northern provinces of Nyasaland.

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

### French and British Railway Services

February 9

SIR,—I observed an excellent advertisement of the French Railways in a British daily newspaper a few days ago. After contemplating all that is displayed in this commendable enterprise and also an article which I read with great interest in your January 6, 1950, issue on the reconstruction of Italian stations, I am left with a feeling of depression when comparing these things with the signs of ill-health so manifest at the present time in our own transport system.

Surely these two countries have suffered even more than we did during the war from upheaval and destruction to stock and permanent way. Today Italy is practically bankrupt and its economic stability is certainly no better than our own; nevertheless we see the Italians full of eager enterprise and imagination, demonstrating a vitality that we seem to lack.

This is Festival year in Britain. We start it in our railway services by savage cuts that go further than anything we have experienced to undermine the public mind already alarmed at the efficiency of British Railways.

It is time that we called a halt to this kind of thing. It is not an issue merely of nationalisation or anti-nationalisation; it is a plain issue of efficiency or lack of efficiency. Where is the fault? Public opinion must find it and root it out.

Perhaps there is method in all this madness and like the drastic pruning of a sickening plant, it may lead to restored vitality in more intense growth. I sincerely hope so.

Yours faithfully,

B. NEWTON BROOK

5, Prospect Vale, Heald Green, Cheshire

### Economics of Long-Distance Electrification

March 2

SIR,—The article under this title in your issue of December 1 by Mr. Stephen A. Vince, which consists principally of a comparison of the a.c. and d.c. systems, is of interest to all who are concerned with main line electrification. I think it calls for some comment.

Mr. Vince says that "properly engineered a.c. traction installations actually cause less telegraph and telephone interference than d.c. installations," and "with a.c. it is possible to run communication services completely undisturbed, whereas d.c. gives much trouble." This is a very surprising statement. According to my information, freedom from interference in the case of a.c. installations is usually obtained only by elimination of all open-wire communication circuits in the vicinity.

In the d.c. case, with proper design this step is normally avoidable so far as interference is concerned, due to the facts that in the d.c. installations interference on the d.c. side of the substations can be readily eliminated by suitable smoothing equipment, while on the a.c. side the balance of the circuit with respect to earth normally is incomparably better than that of the single-phase system, in addition to which the harmonics can when necessary be reduced to negligible values by phase-multiplication methods. Contrary to Mr. Vince, I think one of the most important advantages of the d.c. system over the a.c. is the greater ease with which communication interference can be avoided.

I also think the statement quoted by Mr. Vince regarding electrolytic corrosion with the d.c. system exaggerates this problem. Certainly such difficulties can arise if they are not guarded against but according to my information it is quite practicable in d.c. installations to reduce electrolytic effects to negligible proportions, by proper adjustment of the relative substation busbar voltages and other known methods.

The most notable feature of Mr. Vince's article is the

tables that he gives of comparative costs of d.c. and a.c. electrification and of d.c. and a.c. locomotives. These are based on prices obtaining in Sweden in 1935, and Mr. Vince states that "they can still be used as comparative values." It is questionable, however, whether such prices are in reality suitable for a comparison of this kind, because (a) the prices in any country inevitably tend to favour the system mainly used there, and as is well known the standard system in Sweden is a.c.; and (b) large changes of design practice have occurred since 1935.

In particular, the first cost and maintenance cost of rectifier substations have been much reduced in the interval relative to other items, through the use of pumpless air-cooled rectifiers in place of the heavy continuously-pumped rectifiers used in 1935, simplification of control and supervisory gear, reduction of transformer size, reduction of size and cost of buildings, and so on. A comparison which ignores these major changes can scarcely be valid.

It is the characteristic of the a.c. system that certain disadvantages as regards the power supply and train equipments are accepted, for the purpose, mainly of saving the cost of closely-spaced converting substations. This was in certain circumstances a sound course 15 to 20 years ago. Today, the converting substations that it was so much desired to dispense with have become a markedly less important factor, and the balance of advantages of the a.c. and d.c. systems has changed as a result.

Obviously the a.c. and d.c. systems for main line electrification each have their own fields of application; but I think their relative merits are not quite as indicated in Mr. Vince's article.

Yours faithfully,

J. C. READ

Manager,

Rectifier Engineering Department

British Thomson-Houston Co. Ltd., Rugby

### Closing of Branch Lines

February 27

SIR,—I fear that I had not appreciated that Mr. Frederick Smith, whose letter appears in your February 16 issue, was concerned only with goods traffic. That, however, does not really affect my argument that local services can still be made a paying proposition, given fast trains at regular intervals with the addition of economies in train and station staff and in line equipment.

Granted that railways are often not so conveniently sited as roads from the passengers' point of view, the decisive factor in influencing traffic to the bus is that it runs at regular intervals which need no effort of memory to keep in mind, while the train runs at too irregular intervals to remember without effort. Surely the clearest answer is the success of the Southern regular-interval electric country services.

That "motor services ought to be, and can be, as reliable as railway services" is a remark typical of many planners who feel deeply aggrieved that neither the forces of nature nor human nature can be controlled in the interests of the "plan." As a matter of practical politics, how does one keep a bus service running when roads are icebound or flooded?

Yours faithfully,

H. L. HAWKER

7, Princes Square, W.2

BRITISH RAILWAYS STATION IMPROVEMENTS.—British Railways are to carry out improvements at a number of London and provincial stations serving Festival of Britain centres or dealing with overseas visitors. The work to be undertaken will vary at each station, but, generally, will include repainting and in some cases improvements to roofing, platform surfaces, and station signs.

## THE SCRAP HEAP

### Fireman's Honeymoon

Train services between Princes Risborough, Buckinghamshire, and Watlington, Oxfordshire, have been suspended until March 17, because railway fireman A. V. Benham, of Chinnor, has been granted twelve days' leave to get married. The wedding takes place at Chinnor on Saturday, and there is no one to carry on his job as fireman, his relief having been called up.

Four trains run daily, with five on Saturdays, from Princes Risborough to Watlington, and five daily, with six on Saturdays, in the reverse direction, and they all stopped running on Monday. Passengers are being carried from the stations at the normal train times by buses.—From *"The Manchester Guardian."*

### York Railway Museum

The railway museum at York, which is the largest in the country devoted entirely to railway subjects, had its origin on the N.E.R. in 1922, when it was decided to assemble items of historic interest for the 1925 centenary of the Stockton & Darlington Railway. For the centenary celebrations every railway in Britain contributed locomotives, rolling stock, and other relics of its early days, and the York railway museum has been a continuation of the 1925 exhibition. Some reference to the proposed redistribution of railway exhibits between a new British Transport museum at Nine Elms (London), the York museum, and other museums at Euston and in Edinburgh and Cardiff, was made in an editorial note in our January 26 issue.

The large exhibits section includes twelve full-size locomotives of the greatest historical significance, ranging from a colliery engine built by George Stephenson in 1822 to the first (G.N.R.) Ivatt Atlantic. Other locomotive exhibits include the G.W.R. *City of Truro*, a G.N.R. Stirling 8-ft. "single" (No. 1), the N.E.R. 2-2-4 tank engine *Aerolite*, the L.B.S.C.R. Stroudley 0-4-2 *Gladstone*, and a Stockton & Darlington Bouch goods engine.

### Models for Railways

With railway lunches and dinners up from 5s. to 6s. travellers must insist on better value.

If Western Region can produce a reasonable meal, why not others? On a journey to and from Oxford I had a lunch of soup, roast goose, ice cream. The goose had apple sauce, onion sauce. Dinner was tomato juice, an excellent piece of halibut, with sauce tartare, biscuits, with choice of three different cheeses, radishes.

Service was swift and courteous. But why should I and my neighbour be surprised because we got value for our money?—From the *Londoner's Diary* in the *"Evening Standard."*

### Great Hall Ceiling at Euston

The ornamental ceiling—the largest of its kind in the world—in the Great Hall at Euston Station is to be redecorated to a colour scheme proposed 105 years ago by its designer P. C. Hardwick. The flat portion of the coffered ceiling will be in light blue and the remainder of the ceiling and walls will be in shades of cream. The column shafts, which



[Reproduced by permission of the proprietors of "Punch"]

Hardwick intended to be marbled to represent red granite, will be in Tuscan red with gilt capitals and bases. The intricate tracery of tubular scaffolding now in position in readiness for the redecorating would reach to the top of Mount Everest—six miles—if the tubes were placed end to end. The only other ceiling in the world like the one at Euston, which has no supporting columns, is in Buckingham Palace.

### The Faithful Heart

There's nothing very glamorous  
About a tram or trolleybus—  
Poor things—but any train, *per se*,  
Pulsates with personality.

Beyond all other work of man  
An engine lives and breathes—it can  
Mingle the devil with divine  
Like any fractious feminine.

I love a locomotive's song,  
As, mile by mile, it hums along;  
It does something to my inside,  
It inculcates a proper pride.

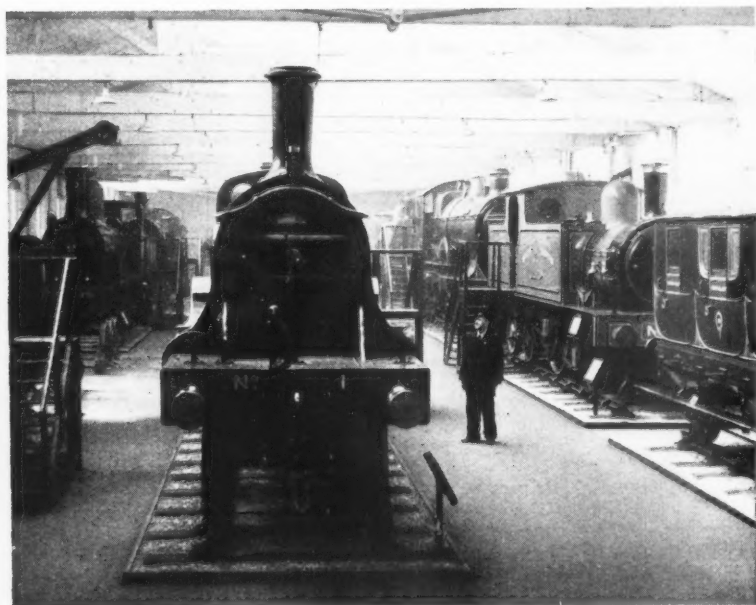
Would you behold a thrilling sight  
Of mobile and majestic might?  
Then watch the Scotch express set forth  
On its long journey to the north.

Or see the "Golden Arrow" glide  
Channel-ward through the countryside.  
Or any holiday express  
Chock-full of human happiness.

A railway terminus to me  
Is just the place for pageantry.  
Here nations meet and mix and flow  
And kings and captains come and go.

And when at last you've ceased to roam  
The old branch train will bring you home  
And you'll rejoice to know some friend  
Thrills as your train comes round the bend.

A. B.



Left to right: Stockton & Darlington 0-6-0 goods engine, G.N.R. "single" No. 1, G.W.R. "City of Truro," and N.E.R. "Aerolite," with L.B.S.C.R. "Gladstone" in background (see paragraph above)

# OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

## NEW ZEALAND

### New Line to Tap Forests

The Government has decided to build a line costing about £3,000,000, from Edgecumbe, on the Paeroa-Taneatua line, to Murupara, 38 miles farther up the Rangitaiki River valley. It is to facilitate early use of the exotic timbers now ready in the Kaiangaroa State Forest. It is estimated that it will take between four and five years to build, and the estimated cost includes rolling stock. Tenders will shortly be called for carrying out the work in sections. It is expected that traffic from Murupara will ultimately reach many million feet of sawn timber each year; most of the timber will be for export.

The new railway will be constructed to main-line standards, with track capable of carrying powerful locomotives. Oil-fired "J" class engines, used extensively on the North Island provincial routes, will be the most suitable type at present available, but it is possible that diesel-electric locomotives may be used to reduce the fire risk.

Because of the mountainous terrain beyond Te Teko, six miles from Edgecumbe, steep gradients will be unavoidable, and for several miles the line will climb at 1 in 45 towards Murupara. In other directions, however, heavily-laden timber and goods trains will face much easier gradients.

## VICTORIA

### Houses for Staff from Britain

The project to provide homes for 750 new railway workers and their families from the United Kingdom and present members of the staff has been so successful that the Government has ordered 500 more pre-fabricated houses.

The houses for the British railwaymen are being erected in the Sunshine and Albion suburban districts of Melbourne, and those for Victorian railwaymen in Melbourne and country districts. The project was initiated by Mr. W. S. Kent-Hughes when Minister for Transport. The Government realised that there was no possibility of finding accommodation for new settlers while the housing shortage persisted.

Mr. Kent-Hughes went to Britain to investigate the capacity of British manufacturing firms to provide pre-fabricated houses for Victoria. He appointed W. J. Simms, Sons & Cooke, Limited, of Nottingham, as principal contractors for the manufacture of pre-fabricated house components. The Railways Commissioners appointed a panel of architects in Melbourne to advise on standards to be adopted, and collaborate with their consulting engineers in London, Messrs. A. E. Turner & John Coates.

The system adopted allows a range of two, three or four bedroom houses, ten

varieties of layout and more than 40 different street elevations. The first batch of British railwaymen, who arrived at Melbourne last year with their families (a total of 131 persons) was given a warm welcome. Copies of a booklet issued by the railways set out the arrangements made for their reception and accommodation and gave full details of conditions of employment in the railway service. They were advised that the rents for their new homes would be: two-bedroom house, 30s. a week; three-bedroom, 35s.; and four-bedroom, 40s.

## WESTERN AUSTRALIA

### Upper Darling Range Branch

During the last Parliamentary Session of the Western Australian Parliament, an Act was passed authorising the closing of the Upper Darling Range Railway, 20 miles in length, running from Midland Junction to Karragullen.

The line was closed during the coal strike in July, 1949, and was not reopened. The major portion was originally a private timber railway and was purchased by the Government in two sections, in 1903 and 1910. A short extension to Karragullen was constructed by the Government and opened in 1912.

Because of a roundabout route and heavy gradients, the working was most uneconomical and almost all the traffic, both passenger and goods, was gradually lost to road transport. Apart from a short section near Midland Junction, it was decided to close the line and use serviceable material elsewhere.

## CANADA

### Ontario Northland Railway

Operating profits of the provincially-owned Ontario Northland Railway in 1949 were \$973,588, \$513,385 below those of 1948. Non-operating revenue increased from \$25,626 to \$108,266. The drop in operating profits reflected rising costs, which rose from \$9,163,411 in 1948 to \$9,666,774 in 1949. Operating revenues in 1949 were \$10,640,362 (\$10,650,384). Freight revenues declined during the year by about \$217,000, but passenger earnings increased.

### Operating Revenues in 1949

Operating revenues of Canadian railways during the calendar year 1949 reached a new record total of \$894,397,000, a gain of \$18,565,000 or 2.1 per cent. over the previous record total of \$875,832,000 reached in 1948. Because of higher material costs, operating expenses rose from \$808,126,000 in 1948 to a record \$831,456,000. Net operating revenues were reduced from \$67,706,000 in 1948 to \$62,941,000 in 1949.

The resulting net operating income

for 1949 was \$30,559,000, a drop of \$2,604,000 or 7.9 per cent. from the preceding year. Non-operating income, largely dividends and subsidiary earnings, was \$39,632,000 (\$42,613,000). Interest payments on funded and unfunded debt were heavier at \$66,688,000 (\$65,901,000). All other non-operating expenses increased from \$12,170,000 to \$15,949,000.

Revenue freight tons in 1949, excluding duplications, declined 7.9 per cent. from 154,933,000 to 142,719,000. Revenue passengers carried continued the steady decline from the wartime peaks, numbering 34,884,000 fares, a decrease of as much as 3,396,000 from the preceding year.

## SWITZERLAND

### Sale of Provisions in Trains

To comply with requests from the travelling public the sale of small provisions and smoking articles on trains has been introduced tentatively by the Federal Railways. The experiment is limited so far to two fast trains between Lausanne and Zurich via Berne. The sales have been entrusted to the Swiss Restaurant Car Company, which undertakes the catering side on the Swiss restaurant cars owned by the Federal Railways.

### Milan-Kandersteg Weekend Trips

In co-operation with the Lötschberg Railway and the Swiss Federal Railways the Italian State Railways have organised weekend trips from Milan to Kandersteg via Domodossola and Brigue by special trains leaving Milan on Saturdays March 3, 10, and 17 and returning from Kandersteg on the following Monday. No passports are required but passengers must carry identity cards. When buying their tickets, passengers may obtain also hotel vouchers. The travelling time between Milan and Kandersteg is about 3½ hr.

### Traffic Resumed on Gotthard Line

After a break of eight days, the longest interruption of traffic ever experienced on the Gotthard line since the opening of the Gotthard Tunnel on January 1, 1882, through traffic, electrically worked and on both tracks, was resumed on February 21. The masses of snow which had blocked the line between Lavorgo and Bodio for 430 ft. have been estimated at some 282,500 cu. ft. but the avalanche itself which was the cause of the disaster was about ten times greater in volume. The debris of snow, rock and tree trunks which covered the line reached a height of about 85 ft. just in front of the northern portal of the Travi Tunnel near Lavorgo, and resembled more a landslide than the debris from an avalanche. Be-

cause of the considerable congestion of goods waiting for the line to be re-opened the further acceptance of consignments to be conveyed over the Gotthard was not resumed until February 24.

## FRANCE

### Season Ticket Reductions

The S.N.C.F. proposes to reduce fares for certain season tickets. The new fares will come into force when approved by the Minister of Transport. The new tariffs include a substantial reduction in the cost of zone tickets valid for three or six months, and a reduction in the price of three-month circular tickets. For instance, a ticket valid three months for all France (18 zones) will be cut from fr.8,440 to 6,750, and a second class ticket for 150 km. from fr.4,000 to 3,200. A zone ticket valid for one month is to be introduced, and a reduction of fr.320 second class and fr.265 third class in Paris suburban season tickets is to be made.

### Mock Accidents

With the object of mobilising official aid for civilians in the event of air, railway or other disasters, the Minister of the Interior gave instructions last

year to the Prefects of all Departments to organise police, fire, and health services ready to respond to any call. The first test came on February 7 in the Department of La Nièvre, where it was announced that a railway disaster had occurred on the line from Paris to Nevers near Charité-sur-Loire. Police demanded confirmation from the local S.N.C.F. officials, who denied the news, but sirens brought police, firemen, ambulances, and doctors to the scene. More than 1,500 persons assembled. As they arrived, heads of the different services reported to the Prefect of La Nièvre. The result of the experiment was regarded as a satisfactory test of the readiness of public services to come to the aid of civilians.

## AUSTRIA

### Tourist Sleeping Accommodation

The Federal Railways have introduced a new type of sleeping accommodation for alpinists, skiers, and so on in the form of *sport liegewagen* (coaches with lying-down accommodation for sportsmen). These are mostly bogie compartment coaches with transverse berths. One type contains nine compartments, each with two tiers of three berths, or 54 berths in all; another type contains eleven or twelve three-

berth compartments (each with a wash basin and space for skis, rucksacks, and so on), or 33 or 36 berths in all. A small supplement is charged over the third class fare. Other *liegewagen* are under construction, including four-wheel coaches with five six-berth compartments.

## IRELAND

### New Coaches for C.I.E.

The first six of 25 new main-line coaches, costing £8,000 each, have been completed at Inchicore and are now in service. They are the first new coaches built there since 1937. Each coach accommodates 50 passengers in three first-class and four third-class compartments.

They are fitted with a public address system enabling the guard to announce the names of stations in advance, and have plug-in points in each compartment so that they may be used on the "radio trains." The coaches are painted green. The upholstery is of Irish tweed, with antimacassars in Irish linen, and the rugs are hand-woven in Celtic design. The first-class compartments are finished in mahogany and the third-class in silky oak. Individual reading lamps are fitted. There are two luggage racks, one for light items.

## Publications Received

*British Railways Locomotive Reference Book* (1-39999). Compiled by G. Rosling and J. Bray. Birmingham, 27. Christian & Sykes, Publishers to the British Locomotive Society, 60, Olton Boulevard East, Acocks Green. 7 in. x 4½ in. 105 pp. Paper covers. Price 2s.—This latest addition to the series of reference books published for the British Locomotive Society is the second dealing primarily with Western and Southern Region stock. Its scope has been extended in this edition, however, to include locomotives in British Railways 10000-29999 series and all electric multiple-unit trains. Tabulated details of the locomotives includes class, allocation, and names; electric stock is divided into Regions and operating areas.

*British Locomotives from the Footplate*. By O. S. Nock. London, Ian Allan Limited, 282, Vauxhall Bridge Road, S.W.1. 8½ in. x 5½ in. 244 pp. Illustrated. Price 17s. 6d.—Although it may be contended that locomotive working is a specialist theme, here is a book in which both the author's expert knowledge of the subject and his able reference to more general topics such as topography and personal reminiscence of the footplate, are blended in such a way as to appeal to a wide public. Most of the runs described have been made since 1944 and it is interesting for purposes of comparison to note that a number of trips was made with locomotives, which, due to maintenance difficulties, were not in the best condition. The locomotive

types reviewed range from Peppercorn and Bulleid Pacifics to veteran Southern Railway 4-4-0s, and though the author does not claim to have covered all routes in the country, the runs included are a useful cross-section of present-day British locomotive working.

*Diesel Road Vehicles*.—A brochure describing some of the main characteristics of Sentinel diesel trucks has been issued by Sentinel (Shrewsbury) Limited. The booklet is illustrated and depicts various designs of bodies, engine specifications and leading dimensions of the different types, giving road speeds and axle ratios.

*Jersey*.—The Tourism Committee of the States of Jersey, whose London tourist information bureau is at 48, Dover Street, W.1, has issued a brochure with many photographs beautifully reproduced in colour, and a pictorial map of the island. Much compact topographical and meteorological information is given.

*Drilling and Milling Machines*.—A series of illustrated catalogues has recently been issued by James Archdale & Co., Ltd., Ledsam Street, Birmingham, 16, which describes their drilling and milling machines. The catalogues are primarily intended for use at the International Trade Fair, recently opened in Toronto. Included in the publications are particulars of multiple spindle, radial and sensitive drilling machines of various designs and capacity and horizontal mills. Also

included are diagrams of the several types of machines which give floor space occupied, principal dimensions and shipping specifications.

*Commutator Grinding Stones*.—A leaflet, No. Z.D. 17, which describes and illustrates the use of commutator grinding stones, has been issued by the Morgan Crucible Co. Ltd., London, S.W.11. Three grades of grinding stones are available in various designs. These are illustrated and the dimensions of each are given. Additional styles and sizes are available on application.

*British Road Services*.—The Road Haulage Executive has issued two illustrated booklets. One, entitled "Wheels Across Britain," gives brief particulars of the various services, such as general haulage, heavy haulage, carriage of livestock, tank haulage, and contract hire, with a list of British Road Services district offices. The contract hire service is dealt with in greater detail in "Service by Contract" which illustrates some of the types of vehicle used.

*Metrovick Products*.—A recent publication by the Metropolitan-Vickers Electrical Co. Ltd., Manchester, comprises a brief description of the principal Metrovick products. This booklet, N.7001/3, which should prove very useful for reference purposes, contains illustrations of many installations carried out by this firm, including turbo-generators, hydro-electric generating sets, switchgear, and a 2,000-kW. gas-turbine geared alternator set installed in the Trafford Park works of the firm.

## Timetables and Train Running

### *Arguments for the abolition of recovery margins to improve main-line punctuality*

(By a Correspondent)

**D**URING and since the war the practice has arisen in Great Britain of allowing recovery margins in the schedules of express passenger trains. In the United States it has been customary, for many years, to ease the running speeds of long-distance trains over the final stages of their journeys to make time recovery possible, but with this important difference from British operating tradition, namely, that in the U.S.A. every driver is expected to make up arrears of time, even though the time may have been lost by circumstances outside his control. These American recovery margins are seldom actually designated as such in the working timetables, though their purpose is obvious; neither do they apply universally, for the competing high-speed diesel streamline trains from Minneapolis and St. Paul to Chicago, to take one example, have the same very fast bookings from Milwaukee into Chicago as they have in the reverse direction.

#### British Railways Practice

On most of the principal main lines today, however, the recovery margins are strictly applied to all express passenger trains. On the London Midland Region at least 5 min. extra is allowed from Willesden into Euston, from Coventry to Birmingham, from Whitmore to Crewe northbound, from Coppenhall Junction to Crewe southbound, and so on, with all the important expresses. On the Eastern Region there are similar allowances of 6 min. from Knebworth into Kings Cross, 4 min. from Huntingdon to Peterborough northbound and Grantham to Peterborough southbound, from 2 to 5 min. from Retford to Doncaster northbound, and 4 min. from Selby to Doncaster southbound. On the Western Region there are recovery margins into Paddington and elsewhere, though more varied as to the minutes allowed.

The Southern Region alone appears to make no use of recovery margins, but this is hardly surprising, as it would be very difficult to fit such margins into the dense electric occupation of the main lines into the Southern terminals in London. It is significant, however, that without the use of such margins the Southern Region has an enviable record for main-line punctuality: figures given as recently as the February 2 issue of *The Railway Gazette* showed that during September, 1950, the average late arrival of main-line trains was no more than 1.63 min.

However, despite the provision of lavish recovery margins over some main lines, emergencies arise in which no advantage is taken of the fact that these margins exist. A contributor to the March issue of *The Railway*

*Magazine* describes a journey in December, 1950, from Dundee to Kings Cross on the first morning service of the day, which carries through coaches from Aberdeen for attachment at Edinburgh to the southbound "Flying Scotsman," when, because of bad locomotive running and delays outside Edinburgh, the north train arrived at Waverley at 10.10 a.m., to find that the 10 a.m. "Scotsman" had been dispatched without the Aberdeen section. With smart working of the coaches round on to the "Scotsman" at Waverley, it should have been possible at least to start the train intact by 10.15 a.m., and as it has a total of more than 15 min. recovery margin in its schedule, this would seem the kind of emergency that recovery margins are designed to meet.

As it was, the coaches were attached to the 8.35 a.m. from Glasgow to Kings Cross, which, mainly because of this addition leading to overloading from Newcastle onwards, reached London 48 min. late, and with its through passengers from beyond Edinburgh in effect 84 min. late. An American engine-crew would have set about recovery of the arrears without question; a French crew would have welcomed the opportunity with open arms; and, had the "Scotsman" taken the through coaches as it was scheduled to do and recovered the time, there was a reasonable chance of the Glasgow train keeping time also, instead of having all its passengers suffer serious delay also by this arbitrary action at Edinburgh.

Close observation of present-day locomotive performance on British main lines would suggest that timetable recovery margins, rather than resulting in more precise punctuality, tend to encourage a go-as-you-please type of running that has the opposite effect. Even on a run which has finished punctually, the writer has often observed a driver taking matters very easily on the earlier stages of the journey, with loss of time, and then, in the absence of delays, running 4 or 5 min. out of his path until the next stage where a recovery margin is allowed, which he uses to recoup the arrears and arrive to time. This means that the driver has added the margin to his schedule, which defeats the whole object for which the margin was included.

One wonders, also, what can be the psychological effect on a driver's mind of the point-to-point timing of so important an express as the down "Tees-Tyne Pullman" of the Eastern Region, which encourages a driver to work his engine very hard in order to get through Huntingdon 58.9 miles from Kings Cross, in 61 min., then gives him an easy 20½ min. (including 4 min. re-

covery) for the 17.5 miles on to Peterborough, after which he must blaze away to complete the 33.3 miles over Stoke Summit to Barkston South Junction in 35 min., but only to face a time of 57 min. for the largely downhill or level 46.3 miles from there to Doncaster, over which alone there is a recovery margin of 15 min. After this comes another very hard spell, of 76.3 miles from Doncaster to Darlington, with the dead slowings through both Selby and York included, to be covered in no more than 77½ min. So erratic a path as this, despite its half-minute refinements of timing, can be no encouragement to strict time-keeping. A similar example on the London Midland Region is the down "Comet," which on Saturdays is expected to maintain its normal speed down the main line to Colwich, but then to spin out a recovery margin of 24 min. between there and Stoke-on-Trent, not to mention 5 min. further from Stoke to Stockport, because of Saturday mid-day line occupation through the Potteries.

#### Strain on Signalmen

Recovery margins also throw an undesirable strain on signalmen. If an express train is punctual as it enters a section through which a recovery operates, and the driver continues to run normally, are the signalmen through and at the far end of the section concerned to hold the train up so that it does not pass out of the section before time? In this connection it would not be difficult to prove that delays to expresses in the vicinity of traffic centres on both sides of which recovery margins normally operate, have become considerably more habitual since the practice of allowing such margins began than ever before.

Moreover, though in the past delays to important passenger trains were likely to be taken up with vigour, the effect of slack timings and recovery margins today seems to be that such delays are regarded as part of the normal routine, with depressing effects on engine crews and on timekeeping, which, with all allowance for the condition of locomotives and the poor quality of coal, tends steadily to worsen.

Before the war it was a commonplace to say: "the faster the train, the better the punctuality." This was true, not only of streamline trains like the "Silver Jubilee," "Coronation," and "Coronation Scot," for which special provisions were made, such as double-block working, but also of expresses such as the "Bristolian," "Cheltenham Flyer," 5.25 p.m. from Liverpool to Euston, and others which had no distinguishing feature apart from their fast

timings. In addition to the tonic effect of fast schedules in putting on their toes all concerned in traffic operation, however, there are practical reasons why the commonplace is true.

A signalman who has to regulate the running of freight trains between passenger trains, assesses his available margins on the train reports received from the signal boxes, maybe 15 to 30 miles away, from which a particular express is approaching him. He is therefore making his plans on a set of circumstances existing some 15 to 30 min. before the express is likely to pass his box on the assumption that the circumstances will still apply when the train actually reaches him. On sections with heavy gradients, over which freight trains move at slow speed, as, for example, between Carnforth and Carlisle, the signalmen may be thinking even more than 30 min. in advance of the advent of an express.

Now, if the express recovers a considerable amount of time between passing the last previous reporting point and the box, the margin on which the signalman counted for getting the preceding freight out of the way is destroyed and the express gets checked. A common result is for the passenger train which was, say, 5 min. late at "A" (the reporting point) but which approaches our signalman, "B," on time, to be 7 or 8 min. late past "C" (the next reporting point) because of the delay. As there is no standard practice of time recovery in Britain, the signalman cannot act on the assumption that the express will pick up time, and it is for this reason that enterprising feats of time recovery by individual engine crews, made easier by slack timings, often prove valueless because of later signal checks.

The suggestion is not that time recovery by engine crews should be

discouraged. On the contrary, it should be the normal practice, but point-to-point running times should be pruned to such a degree that with normal loads a recovery of anything more than, say, 5 min. in 50 miles is unlikely. This should be of considerable assistance to traffic regulation by signalmen and control offices. An alternative might be an increase in the margins normally allowed by signalmen between freight trains and following passenger trains, when the latter are running late, but this is undesirable as having too retarding an effect on freight traffic over congested sections of line.

#### Saving in Coal Consumption

There are other reasons why passenger train timings in Great Britain today are in need of radical overhaul. A passage in the recent paper read by Mr. D. R. Carling, Superintending Engineer of the Rugby Locomotive Testing Station, before the Institution of Locomotive Engineers, referred to tests which have been made of L.M.R. Class "5" 4-6-0 locomotives, both at Rugby and on the road with the mobile testing plant, from which it seemed clear by calculation that, when one of these locomotives was being run between St. Pancras and Manchester in the 1948 locomotive exchanges, an excessive amount of coal was being burned because of the slack timing of the train. From the data obtained by the testing of these engines, which showed the speeds at which maximum boiler output and maximum efficiency were obtained, it was calculated that had the run been made in 22 min. less time, there would have been a saving of 576 lb. of coal.

This article suggests that, first, there should be a return to precision in scheduling by sweeping away as many recovery margins as possible. With all

allowance for the fact that the Southern Region has less freight traffic to handle than the other Regions of British Railways, its timekeeping without recovery margins would tend to show that punctuality benefits rather than suffers by their absence. Second, there should be a restoration of a *certain number* of expresses at least, when the present coal situation has eased, to something like pre-war schedules, even though streamline timings may not be practicable—for example, 2 hr. between Euston and Birmingham and Paddington and Bristol; 3½ hr. between Euston and Manchester and Kings Cross and Leeds—with a tightening up of schedules generally.

Third, there might well be propaganda among railway staff in all Regions in the interests of punctuality; here the pre-war "On Time" crusade of the former L.M.S.R. provided an admirable example of what can be done, and there can be no question as to its effectiveness. Publicity might be resumed of meritorious feats of time recovery by engine crews, guards, and station staffs; and any way in which the competitive element could be introduced as an incentive—between engines, for example, in the matter of freedom from casualties—would be helpful. Such measures would make a considerable impression on the public mind as to the determination of British Railways to leave no stone unturned to improve the present situation.

The acute difficulties resulting from shortage of shed staff, and the inadequate maintenance of engines that results, cannot be gainsaid, nor those arising from the indifferent quality of coal with which engines and their crews have to contend; but throughout the recent war it was precisely the challenge of difficulties that made our war effort the success it was.

**BRAKE AND SIGNALLING EXHIBITS AT THE B.I.F.**—Essential brake, signalling, colliery, and rectifier interests will be illustrated by the exhibits of the Westinghouse Brake & Signal Co. Ltd. at the Castle Bromwich section of the British Industries Fair, from April 30 to May 11. A model track will demonstrate control relays and colour-light signals operated by hand plungers or vehicle treadles. The background to these and other exhibits will be provided by a comprehensive display of photographs and data sheets.

**TOURIST PROSPECTS IMPROVING.**—Sir Alexander Maxwell, Chairman of the British Travel & Holidays Association, stated in London recently that prospects for travel from North America this year are now brighter than seemed possible a few weeks ago. Despite the big attraction of the Festival of Britain there was a possibility of a serious falling off in tourist traffic owing to the international situation. A recent survey of the American travel market, however, had shown that inquiries for travel and bookings to Britain were coming in satisfactorily and, therefore, they might still hope

to reach the earlier target of 200,000 visitors from America this year. Sir Alexander Maxwell said that Americans were taking a great interest in the Festival of Britain which they saw as an outstanding tourist attraction and as a "symbol of confidence and hope in a troubled world."

**HINDRANCES TO AUSTRALASIAN RAILWAY EXPANSION.**—Shortage of vital materials and manpower in the railway industry caused grave concern to Australian and New Zealand Railway Commissioners who recently met in conference in Wellington. The conference decided that the commissioners should draw the attention of their Governments to the disastrous effects that these shortages must have on the future development of railway transport. A statement issued by the conference said that the situation not only made it difficult for railways to meet operating demands and properly to maintain plant but has made it impossible to carry out vigorous development which alone can provide for future transport needs for a young and expanding community. The importance of an efficient transport system was not properly

appreciated and the railways were not receiving an adequate share of present production.

**RAILWAY BENEVOLENT INSTITUTION.**—At a meeting on February 21 the board of the Railway Benevolent Institution granted annuities to 14 widows and four members involving an additional liability of £308 17s. a year; 32 gratuities were also granted amounting to £355 to meet cases of immediate necessity. Grants made from the casualty fund during January totalled £530 19s. 6d.

**PROGRESS OF NEW ABBEY STEELWORKS.**—Mr. E. H. Lever, Chairman, Steel Company of Wales Limited, at a dinner of the Port Talbot Chamber of Commerce on February 23, said that the new Abbey works would probably be in operation within six months, and would produce 20,000 tons of sheet steel a week. The full operation of the new plant would make a big contribution to the solution of the problem of tinplate and sheet steel consumers, but he gave a warning that a steelworks was of no use without adequate essential raw materials.

## Cast-Steel Bogies for Goods Vehicles

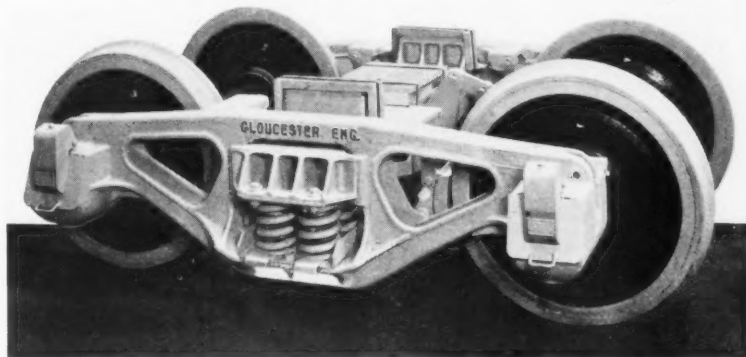
*Arcuate bolster guides and a locking device on axlebox lids*

**P** RIMARILY to suit colonial conditions the Gloucester Railway Carriage & Wagon Co. Ltd. has recently developed after extensive testing a cast-steel spring plankless bogie embodying new features. While following the usual lines of 3-piece frame construction, with integral axleboxes and brake suspension brackets to the side frame, the bogies are provided with arcuate bolster guides of a special type.

### Controlling Angular Displacements

A displaced central pivotal action controls undesirable horizontal angular displacements of the side frames within close limits, at the same time allowing maximum freedom of the side frames for wheel drop, an advantage when operating under poor track conditions. Self-contained bolster spring units, with or without a built-in damper or applied snubber, facilitate both installation and periodic inspection.

The side frames and bolster castings are machined to close tolerances, and gauging is such that interchangeability is assured. Either centre- or side-loaded bolsters can be provided, each type incorporating anti-friction bearing surfaces. Patented spring-loaded centre-pressure type axleboxes are also available, with or without a locking device



*Special design of bogie assembly showing bolster spring unit and axlebox locking device*

fitted to deter unauthorised access to the axlebox packings.

Bogies, frames, and bolsters are of ample capacity for the work they are required to perform and prototypes are subjected to deflection and ultimate load tests, before embarking on large-scale production.

Bogies of this design have been fitted

to tank wagons with a 12½-ton axle load, 10 in. × 5 in. journals, for both the Nigerian and Gold Coast Railways. Bogies for rail and tank wagons have also recently been supplied by the firm to the Ceylon Government Railway. The steel castings were supplied by Robert Hyde & Sons Ltd., Stoke-on-Trent.

## New Rolling Stock for C.I.E.



*Train of six new main-line composite coaches built by Coras Iompair Eireann on a test run between Dublin and Dun Laoghaire (see page 266)*

## British Railways New Main-Line Diesel-Electric Locomotive

*First of three 1,600-h.p. units for operating express passenger services on the Southern Region*

**T**HE first of three Southern Region, British Railways, diesel-electric locomotives to be built at Ashford Works has recently been completed. The locomotive is designed to operate express passenger main-line services.

The mechanical equipment was designed by Mr. O. V. Bulleid, former Chief Mechanical Engineer, Southern Region, and the electrical equipment was the responsibility of Mr. C. M. Cock, former Chief Electrical Engineer of that Region. Subsequently the locomotives were the responsibility of Mr. S. B. Warder, on his appointment as Mechanical & Electrical Engineer, Southern Region. The power equipment has been supplied by The English Electric Co. Ltd.

The following brief description applies to the first two locomotives, since, on the nationalisation of the railways in 1948, the Railway Executive

decided to alter the design of the bogie on the third unit.

The principal particulars of the locomotive are as follow:—

Type of locomotive ...	1 Co-Co 1
Diesel engine ...	16 SVT type
Continuous rating ...	1,600 b.h.p.
One-hour rating ...	1,750 b.h.p.
Number of cylinders ...	16
Dimensions of cylinders ...	10 in. bore × 12 in. stroke
Maximum revolutions of engine ...	750 r.p.m.
Maximum voltage of generator ...	900
Maximum amp. of generator ...	3,000
Tractive effort, maximum ...	31,200 lb.
Tractive effort, continuous rating ...	14,000 lb.
Length over buffers ...	63 ft. 9 in.
Weight in working order ...	135 tons
Fuel oil capacity ...	1,150 gal.
Water capacity (for train heating) ...	880 gal.

The longitudinal frame members are made from I section, suitably braced with cross-members of plate and rolled-steel sections for carrying the engine and other equipment. The load from the underframe is transmitted to the bogies through four segmental bear-

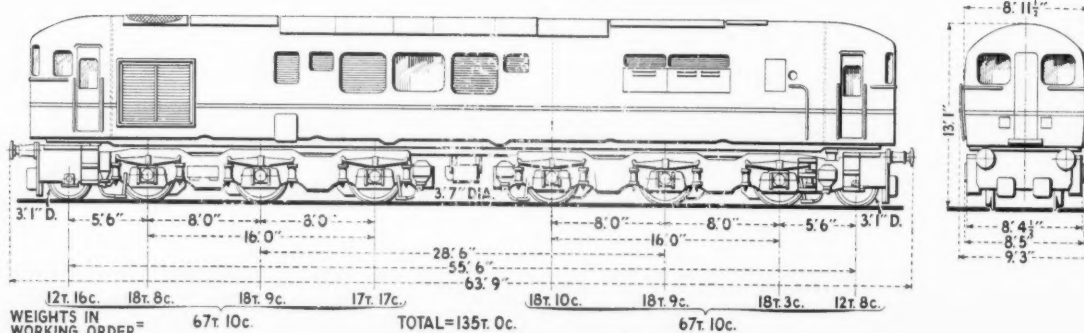
ings of ample proportions, two at each bogie centre, and four spring-loaded bearers near the outer axles.

A sealing plate of light-steel section running the full length of the locomotive is welded to the frame members and forms a sealing plate to prevent oil or water dropping on the bogies and other equipment below the platform. The middle portion of the main members is strengthened by top and bottom plates which are electrically welded. Standard side buffers and drawgear are fitted to both ends of the locomotive.

Corridor connections are provided, so that when two locomotives are coupled together as one unit, access can be obtained throughout the locomotives and train. This consists of a retractable platform for use when two locomotives are run coupled. The body consists of steel panels riveted to the



*Southern Region main-line diesel-electric locomotive No. 10201*



*Principal weights and dimensions of the locomotive*

rolled-steel framing, except for the hinged doors provided above the engine, which are of aluminium alloy, and arranged suitably for the removal of equipment. Silentbloc bearings are fitted to prevent stressing of the superstructure.

### The Power Unit

The diesel engine, a 16 SVT manufactured by The English Electric Co. Ltd., is similar to that installed in the London Midland Region diesel-electric locomotives, Nos. 10000 and 10001, and is a 16-cylinder V-type 4-cycle turbo-charged unit, rated at 1,600 b.h.p. continuously and 1,750 b.h.p. at 1 hour. The engine is pressure charged by four exhaust gas turbo-blowers of Napier manufacture. The bedplate and crankcase are cast in Meehanite and arranged for direct attachment to the generator frame. The whole engine-generator set is carried on three-point bearings resting on rubber pads.

The engine has a cylinder bore of 10 in. and a piston stroke of 12 in. The separately inserted cylinder liners are of cast Meehanite with separate cylinder heads of a similar material; fuel-injection equipment of C.A.V. manufacture is provided.

Cooling water is circulated through the engine and radiators by means of two engine-driven centrifugal pumps. The radiator consists of two identical vertical panels of Serck elements each with oil and water sections.

To ensure an adequate supply of oil when starting the engine, a motor-driven priming pump is incorporated which runs until sufficient pressure has built up in the engine lubrication system to operate the governor servo-mechanism, and an automatic pressure switch sets up the starting circuit. A sensitive mechanical-type governor with hydraulic servo-gear is built integrally with the engine for fuel pump control. The servo-system is supplied from the engine lubricating system, and is so arranged that failure of lubricating-oil pressure causes the governor to shut off the fuel supply to the engine. The engine is started by motoring the main generator from the battery when it operates as a series motor.

### Main and Auxiliary Generators

The main traction generator is a single-bearing machine direct coupled to the engine crankshaft. It is a direct current eight-pole machine self-ventilated and is provided with two separately excited field windings and a series decomposing winding which is also used when the generator is motored from the battery for starting the engine. The frame is fabricated and flanged for attachment to the engine bedplate and crankcase.

The armature assembly is of normal construction and is built up of thin steel laminations assembled and keyed on a cast-steel spider. The spider, which also supports the commutator, is pressed on to the armature shaft. An extension of the shaft through the bearing carries

the overhung auxiliary generator armature. The continuous rating is 1,155 kW. and the current at this rating is 1,650 amp., at 700 V. The one-hour rating for the machine is also 1,155 kW. with a current of 1,750 amp. at 660 V.

The auxiliary generator is a six-pole d.c. shunt-excited machine. The armature is carried on the extension of the main generator shaft and the frame is bolted direct to the main generator frame. There are two ratings, the continuous output being 340 amp. and the one-hour output is 385 amp., both at 135 V. These outputs are available over the whole speed range 430-785 r.p.m.

The electrical control equipment is carried mainly on a centrally placed control frame. Air to this compartment is drawn through Vokes filters to ensure a dust free atmosphere.

### Main Traction Motor

The main traction motor and field weakening contactors and the reverser are of the electro-pneumatic type; all other contactors are of the electro-magnetic type. The control circuits are fed at a constant potential of 135 V. from the auxiliary generator. To make full use of the engine h.p. a load regulator is employed which makes adjustments to the value of one main generator field to suit the load demand. Also, at a certain stage the traction motor fields are shunted to give a higher speed/load characteristic. The full engine h.p. can be used up to 80 m.p.h. by these means.

There are six type EE519/4D series-wound nose-suspended axle-hung traction motors driving three axles on each bogie through single-reduction straight spur gearing with a ratio of 52:21. The motors are connected in pairs in series across the main generator and are wound for a nominal 400 V. Arrangement is made to cut out a pair of motors should a fault develop, and the locomotive can proceed on the remaining motors.

The traction motors are force-ventilated by two motor-driven fans drawing air from outside the locomotive; one fan supplies air to three traction motors. The nominal one-hour rating of each traction motor is 260 h.p. 550 amp. 400 V. and the corresponding continuous rating is 220 h.p. 460 amp. 400 V.

The design of the bogie follows closely that used on the three electric locomotives on the Southern Region, which were described and illustrated in our January 23, 1942, issue, and has an additional axle for weight carrying purposes. Its main components are the side frame-plates between which are riveted the rigid cross-stretchers; the middle two carry the segmental bearings. At the outer end a dragbox is built into the frame and the two spring-loaded side bearers rest on it.

The three driving axles are fitted with axle-suspended traction motors which are force-ventilated by air ducted from the underframe. Side-play is given to

the middle axle of these three, but the other two have only nominal side play. British Timken tapered rolling-bearing axleboxes are used on all axles, those on the truck being of the Cannon type. All the springing is applied direct to the axleboxes.

The end axle is in the form of a pony truck, but, instead of the usual pair of reins centred at a point behind the axle, there are two pairs of short links which are ahead of the axle and are anchored on the buffer beams. These links have spherical bearings which are force-lubricated.

Compressed-air brake equipment is fitted on the locomotive and it is controlled by a self-lapping valve in the driver's desk. The same system is used for controlling the vacuum brake on the train. Two motor-driven compressors, each of 25 cu. ft. per min., are fixed below the middle of the underframe; these supply air for pneumatically operated electrical control gear in addition to that required for brakes, whistle, and sand ejectors. The two exhausters are of the Westinghouse 3V72 type; one of them runs continuously for maintaining the vacuum in the train, and the other is switched on to obtain a quick release of the brake.

### Train Heating Equipment

Steam required for heating the carriages of a train is produced in a Spanner Spiralflo boiler fitted with Laidlaw Drew automatic oil burner. A continuously running rotary pump feeds water to the boiler through a Mobrey control regulator. After the boiler equipment has been started its subsequent operation is controlled automatically by the steam demand.

Driving instruments are provided in each cab, and automatic alarm systems are embodied in the control equipment, which is so arranged that in the event of any fault developing when two locomotives are coupled together, indication is given to the driver as to which locomotive is at fault.

### Principal Contractors

The following as sub-contractors supplied the equipment for the locomotives:—

Power equipment ...	The English Electric Co. Ltd.
Laminated springs ...	Samuel Fox & Co. Ltd.
Auxiliary coil springs ...	Turton Brothers & Matthews Limited
Auxiliary bearing and crawler rubber springs ...	Geo. Spencer, Moulton & Co. Ltd.
Axleboxes ...	British Timken Limited
Brake equipment ...	Westinghouse Brake & Signal Co. Ltd.
Air filters ...	Vokes Limited
Train heating boiler ...	Spanner Boilers Limited
Silentbloc bearings ...	Silentbloc Limited
Fuel and water tank gauges ...	K.D.G. Instruments Limited
Service tank float gauges ...	Bayham Limited
Drop windows ...	Beckett, Laycock & Watkinson Limited
Window wipers ...	Trico-Folberth Limited
Fire protection system ...	Pyrene Co. Ltd.
Wheel centres ...	Hadfields Limited
Speedometer ...	J. Stone & Co. Ltd.
Plastic panels ...	Thomas De La Rue & Co. Ltd.
Mechanical lubricator ...	Tecalemit Limited
Copper pipes and fittings ...	Yorkshire Copper Works Limited
Re-fuelling couplings ...	Automotive Products Co. Ltd.
Body sheeting ...	John Summers & Sons Ltd.
Radiators ...	Serck Radiators Limited

## Reconstruction of Nithsdale Road Bridge, Glasgow

*Difficult renewal work carried out without dislocation of train services*



*South face of reconstructed bridge showing new trestling*

**N**ITHSDALE Road Bridge, Glasgow, which normally carries a large part of the city's road traffic to south-west Scotland, was constructed in 1889 to carry Nithsdale Road over the Cathcart District line of the Caledonian Railway near Pollokshields (West) Station. An adjoining bridge, above Strathgungo Station, carrying the same road, was constructed much earlier when the original Glasgow, Barrhead & Kilmarnock line was opened.

In 1936, due to corrosion of the unprotected steel trough flooring and its inadequacy to carry modern traffic, it was deemed advisable to restrict the tonnage of vehicles crossing the bridge; this restriction remained in force until the beginning of the reconstruction work. But for the outbreak of war, this bridge would have been renewed before. As a result of this delay a temporary strengthening of the superstructure, comprising the erection of a light steel trestle, had to be carried out in 1948. The tracks were realigned to give the necessary clearances.

### Heavy Road Traffic

The difficulties in carrying out reconstruction work of this nature may be appreciated when it is realised that apart from normal vehicular traffic, including trams and buses, the bridge also carries G.P.O. cables involving about 4,000 lines, one 12 in. dia. high-pressure water main, one 18 in. and one 10 in. dia. high-pressure gas mains and eight cables belonging to the British Electricity Authority, three of which carry 20,000 volts each. The work of resiting these utility services was carried out without inconvenience to the users.

The original plan was to provide for

a single-line tram service over the bridge during the reconstruction, but removal of the road material revealed that the old superstructure was in such poor condition that the only course was to close

The reconstruction work consisted of removing the old steelwork, taking down the old wall or abutment for a length of 380 ft. and rebuilding it in concrete with sandstone facing, and providing a new steel and concrete superstructure to carry the roadway, which was regraded. It involved the removal of about 150 tons of old steelwork and about 2,400 tons of masonry; the reconstructed bridge involved the placing of 178 tons of steelwork, 4,200 tons of concrete and 450 tons of stonework.

Work began on the bridge on February 7, 1949. It was decided as a trial to work in short lengths of 12 ft. so far as taking down the old abutment and rebuilding the new were concerned. This policy was continued as far as possible, as the nature of the ground necessitated deep excavation to find a secure foundation for the new work.

### Piles for Foundation

As the work progressed, the thick stratum of stiff blue clay on which the foundation was to rest began to dip, gradually at first and then more rapidly, until it no longer became economic to continue excavation. Accordingly, when the required excavation depth reached 11 ft. below rail level, this method was



*Diagram showing position of the bridge*

the road to all except pedestrian traffic. This continued until April 15, 1950, when a section of the bridge was reopened for tram and vehicular traffic.

As the bridge resembles a small tunnel approximately 330 ft. long, a strict look-out had to be kept to prevent the possibility of danger both to the 57 daily trains on outer and inner lines of the Cathcart circle service and to the workmen employed on the site.

discontinued, bores were taken, and it was decided to pile the remainder of the foundation, using 14 in. x 14 in. x 20 ft. reinforced concrete piles at 5 ft. centres in line along the front and rear of the foundation. The piles were driven to approximately 17 ft. below rail level, the top being broken out and the reinforcing embodied in that of the foundation. The length of the abutment so constructed is 140 ft.

In spite of all the difficulties with this type of work, satisfactory progress was maintained, due mainly to the abnormally dry summer of 1949, although during the wet spring weather that year, traffic had to be temporarily suspended on the outer circle service for 24 hr. because of the threatened instability of the old wall. By working continuously throughout the night, the dangerous portion of the wall was removed (about 65 tons of masonry) and ordinary traffic working was resumed at midday the following day.

#### Closing of Streets

Although there was considerable disruption of road traffic, including the closing of streets for lengthy periods, and also interference with the Mount Florida-Paisley Road tramway service, the work of reconstructing the bridge proceeded without dislocation of, or alterations to, the local train service, apart from the incident which has been mentioned.

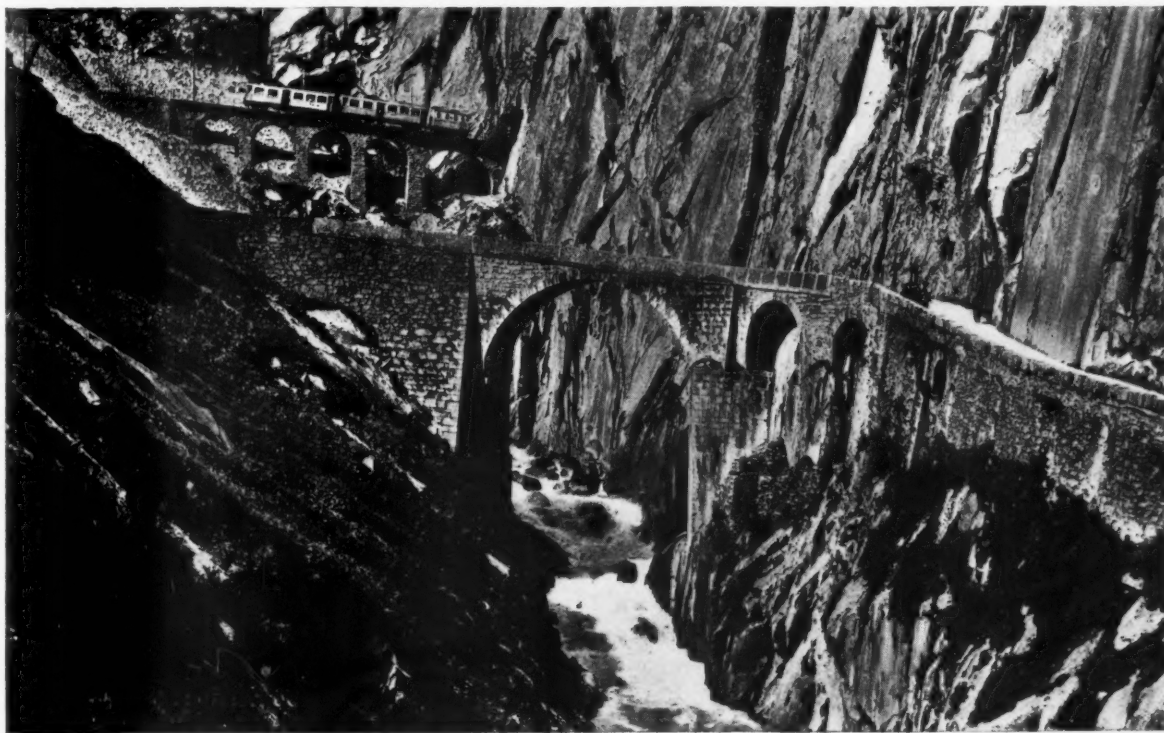
The work, so far as British Railways was concerned, was completed at the end of August, 1950; the road surfacing work including grading the bridge approaches to the new levels was carried out by Glasgow Corporation and finished in November, 1950.



*Construction of the new parapet at north end of bridge*

The contractors to the Railway Executive for the work were Murdoch MacKenzie Limited, of Motherwell, and the steelwork sub-contract was entrusted to P. & W. MacLellan Limited, of Glasgow.

### A Swiss Mountain Railway Scene



*Train of the Schöllenen Railway ascending from Göschenen to Andermatt, above the Gotthard Tunnel*

Photo]

J. Haemisegger

## Training British Railways Refreshment Room Staff



*Tea-making class*



*Correct method of refilling beer barrels*



*Buffet assistants from refreshment rooms managed by the Hotels Executive in all Regions of British Railways now undergo training at the school at Marylebone started by the former L.N.E.R. in 1946. Those seen above are receiving instruction in the correct way to tap beer barrels*

## RAILWAY NEWS SECTION

## PERSONAL

## BRITISH RAILWAYS APPOINTMENT

The Railway Executive has announced that Mr. J. W. Watkins, Operating Superintendent of the London Midland Region, has been appointed Chief Regional Officer, London Midland Region.

Mr. Daniel Herlihy, B.E., M.I.C.E.I., Assistant Chief Engineering

lin. In 1922 he joined the Great Southern & Western Railway as a pupil engineer, and in 1925, after the general amalgamation of the railways became Assistant District Engineer in Dublin. In 1930, when the six former railway engineering districts were reduced to four, he became District Engineer, Dublin, and held this position until July, 1948, when he became Acting Chief Engineer. He is President of the Irish Railway & Steampacket Union and

Mr. O. V. S. Bulleid, C.B.E., M.I.Mech.E., M.I.Loco.E., Consulting Mechanical Engineer to Coras Iompair Éireann, as recorded in our February 16 issue, has been appointed Chief Mechanical Engineer. In 1920 he was appointed Assistant Carriage & Wagon Superintendent of the Great Northern Railway, and in April, 1923, he became Assistant to Sir Nigel Gresley, Chief Mechanical Engineer, L.N.E.R., which position he held until he joined the



Mr. Daniel Herlihy  
Appointed Chief Engineer,  
Coras Iompair Éireann

[Lafayette]



Mr. O. V. S. Bulleid  
Appointed Chief Mechanical Engineer,  
Coras Iompair Éireann

[Elliott]

[&amp; Fry]

Adviser to the Department of Local Government, Éire, who as recorded in our February 16 issue, has been appointed Chief Engineer, Coras Iompair Éireann, was educated at North Monastery, Cork, and took his engineering degree at University College, Cork. He subsequently held positions with the Cork Harbour Commissioners and with local authorities in Tipperary, North Riding, before joining the engineering staff of the Department of Local Government in 1937. Mr. Herlihy has been Assistant Chief Engineering Adviser to the Department of Local Government since 1947. He is an Associate Member of the Town Planning Institute.

Mr. P. T. Somerville-Large, B.A., B.A.I., M.I.C.E.I., who, since 1948 has been Acting Chief Engineer, Coras Iompair Éireann and, as recorded in our February 16 issue, has now been appointed Deputy Chief Engineer, was educated at Fermoy, and at Haileybury College. He took his arts and engineering degree at Trinity College, Dub-

Vice-Chairman of the Irish Section of the Permanent Way Institution. In 1934, together with a number of other railwaymen, Mr. Somerville-Large founded the Mount Street Club, a unique self-subsistence scheme for unemployed men, which is still largely controlled by railway employees.

## SCOTTISH REGION APPOINTMENTS

The Scottish Region of British Railways has announced the following appointments:—

Mr. J. M. Fyfe, Assistant to Motive Power Superintendent (Maintenance), to be Assistant to Motive Power Superintendent (Utilisation), Scottish Region, Glasgow.

Mr. W. H. Underwood, Assistant District Motive Power Superintendent, Glasgow (North), to be Assistant to Motive Power Superintendent (Maintenance), Scottish Region, Glasgow.

Mr. William Clegg, Stationmaster, Leicester (Central), to be Assistant District Traffic Superintendent, Ayr.

Southern Railway as Chief Mechanical Engineer in 1937. Mr. Bulleid was a member of Sir James Milne's commission which in 1948 investigated the public transport position in Éire, and following publication of the commission's report, he was invited by the Chairman of Coras Iompair Éireann to become Consulting Mechanical Engineer to the undertaking. He accepted the invitation, resigned his position as Chief Mechanical Engineer, Southern Region, British Railways, and in October, 1949, took up duty with C.I.E. He was President of the Institution of Mechanical Engineers for 1946-47; President of the Institution of Locomotive Engineers from 1939 to 1944; and President of the Institute of Welding for 1949-50. He is a member of the Smeatonian Society of Civil Engineers and is also a member of the general council of the Engineers' Guild. Mr. Bulleid was made a C.B.E. in 1949. Last December he had the rare distinction of being made an honorary member of the American Society of Mechanical Engineers.

Mr. M. S. Wilson, Commissioner for Transport, Tasmania, is retiring this month.

We regret to record the death on March 3, at the age of 62, of Mr. A. H. Peppercorn, O.B.E., M.I.Mech.E., who was Chief Mechanical Engineer, L.N.E.R., and Eastern and North-Eastern Regions, British Railways, from 1946 to 1949. He was educated privately and at Hereford Cathedral School, and entered the service of the Great Northern Railway in 1905 as a premium apprentice at Doncaster Locomotive Works,

Engineer at Stratford, and in 1937 he became Locomotive Running Superintendent of the L.N.E.R. Southern Area. A year later he was promoted to the post of Mechanical Engineer, North Eastern Area, at Darlington. Mr. Peppercorn returned to Doncaster for the second time in 1941, when he was appointed to the dual post of Assistant Chief Mechanical Engineer of the L.N.E.R. and Mechanical Engineer, Doncaster. Four years later he relinquished the latter post to give closer assistance to Mr. Edward Thompson, then Chief Mechanical Engineer, and to take charge

Mr. David Hill, Commercial Superintendent's Office, York, has been appointed Assistant District Passenger Superintendent, Newcastle, North Eastern Region.

We regret to record the death on March 2, at the age of 74, of Mr. Edgar Alcock, M.B.E., Chairman & Joint Managing Director of the Hunslet Engine Co. Ltd. Mr. Alcock began his apprenticeship under Aspinall at Horwich, and for three years subsequently was in general engineering. He rejoined the Lancashire & Yorkshire Railway in 1898 as an Outdoor Assistant to



*The late Mr. A. H. Peppercorn*

Chief Mechanical Engineer, L.N.E.R., and Eastern and North Eastern Regions, British Railways, 1946-49



*The late Mr. Edgar Alcock*

Chairman of the Hunslet Engine Co. Ltd., 1941-51

first under Mr. H. A. Ivatt, and afterwards under Sir Nigel Gresley. On completion of his apprenticeship, Mr. Peppercorn gained running-shed experience, and subsequently was appointed an Assistant to the District Locomotive Superintendent at Ardsley, later occupying a similar post at Peterborough. During the 1914-18 war he served in the Chief Mechanical Engineer's Department of the Royal Engineers in France, and, after carrying out various duties was finally appointed Technical Assistant to the Chief Mechanical Engineer at the Directorate-General of Transportation, France. On demobilisation he became District Locomotive Superintendent at Retford, and subsequently returned to Doncaster as Assistant-in-Charge of the wagon shops. In 1921 he was appointed Assistant to the Carriage & Wagon Superintendent at Doncaster, and on the formation of the L.N.E.R. in 1923 became Carriage & Wagon Works Manager at Doncaster; four years later he was appointed to a similar post at York. His next appointment, in 1933, was that of Assistant Mechanical

Engineer of the department in his temporary absence. Mr. Peppercorn was appointed Chief Mechanical Engineer in 1946, and subsequently held this position with the Eastern and North Eastern Regions of British Railways, until his retirement in December, 1949.

#### ARTHUR HENRY PEPPERCORN— AN APPRECIATION

Arthur Henry Peppercorn was the last of the Chief Mechanical Engineers of the London & North Eastern Railway. From the time he started on the old Great Northern Railway to the time he set active work aside he had all his share of affection with those with whom he came in contact. Ever ready to help, ever ready to take responsibility, full of the lore of his great teacher, Herbert Nigel Gresley, invaluable in those so difficult and arduous days of war. Peppercorn rose to the highest position of his department and has surely left an indelible mark on British Railways.

E.T.

the Chief Mechanical Engineer, and among other work had charge of the erection of the coal hoists at Goole, Manchester and Fleetwood, and the electro-pneumatic signalling installation at Bolton. Six or seven years later he followed H. A. Hoy, to Beyer, Peacock & Co. Ltd. as Assistant Works Manager at Gorton Foundry, and held that position through the early development period of the Garratt locomotive until, in 1912, he became Works Manager to the Hunslet Engine Co. Ltd. He joined the board of the Hunslet Engine Co. Ltd. in 1917, and subsequent to the first World war he became Managing Director. On the death of Mr. Alec Campbell in 1941, Mr. Alcock was elected Chairman, but retained a Joint Managing Directorship with Mr. John Alcock. He had, for many years, also taken a leading part in the work of the Locomotive Manufacturers' Association.

Sir Henry Wilson Smith has been elected as a Director of the Vacuum Oil Co. Ltd.

British Railways, North Eastern Region, has announced that Mr. T. H. W. Cruddas, Works Manager, Shildon, has retired, and has been succeeded by Mr. W. Vandy, who was formerly Assistant Works Manager, Shildon.

We regret to record the death on February 20, at the age of 78, of Mr. William Hopwood, founder of W. Hopwood & Co. Ltd.

Mr. S. W. Goodey, Publicity Manager of A.C.V. Sales Limited, and formerly Publicity Manager of the Associated Equipment Co. Ltd., has retired.

We regret to record the death in Montreal, at the age of 66, of Mr. David B. Carswell, a former Managing Director of Canadian Vickers Limited.

#### LUNCHEON TO MR. DELORY

Mr. John Elliot, Chairman, and Members of the Railway Executive entertained to luncheon at 222, Marylebone Road, on March 5, Mr. Delory, President of the International Railway Congress Association, on the occasion of a meeting in London of the Permanent Commission of the Association. Among others present were Messrs. C. Boyaux (France), T. C. Courtney (Eire), P. Ghilain (Belgium), R. Goursat (France), F. Q. den Hollander (Netherlands), C. Lucchini (Switzerland), H. E. Stokke (Norway), E. G. J. Upmark (Sweden) and Sir Gilmour Jenkins.

#### SOUTHERN REGION APPOINTMENTS

The following appointments have been announced by the Southern Region of British Railways:—

Mr. A. Earle Edwards, District Traffic Superintendent, Southampton, to be District Traffic Superintendent, Orpington, in place of Mr. P. Nunn, retired.

Mr. P. A. White, Assistant to Superintendent of Operation, to be District Traffic Superintendent, Woking, in place of Mr. C. F. de Pury, deceased.

Mr. J. D. Atkins, Deputy Assistant for Road Transport, Commercial Superintendent's Office, to be Assistant District Traffic Superintendent, Redhill, in place of Mr. G. J. Anderson.

Mr. L. T. Corney, Goods Agent, Portsmouth, to be Assistant District Traffic Superintendent, Woking, in place of Mr. W. H. Dabney.

Mr. S. H. Isaac, Assistant to Docks & Marine Manager, to be Assistant Marine Manager.

#### ARGENTINE MINISTRY OF TRANSPORT

Consequent on the changes at the Argentine Ministry of Transport referred to in our editorial columns, the following appointments have been made:—

Mr. J. E. Maggi, to be Minister of Transport.

Mr. F. T. Perrone, to be Director General of Construction & Acquisitions, Ministry of Transport.

Mr. T. A. Crivelli, formerly Administrative Director-General, Ministry of Education, to be General Manager, General Roca Railway.

Mr. O. S. Vivas, formerly Sub-Manager in charge of Staff Secretariat of the Nation, to be General Manager, D. F. Sarmiento Railway.

Dr. Miguel Revestido, formerly Sub-Administrator, State Gas Administration, to be General Manager, General Belgrano Railway.

Mr. Isidoro Gonzalez, to be General Manager, General Bartolome Mitre Railway.

## Transport Users Consultative Committees

### *Appointment of Committees for the West Midland, North East, North West and East Anglia areas*

Following the earlier appointment of the Central Transport Consultative Committee and the Committees for Scotland, Wales and London, the Minister of Transport has appointed the members of a further four Transport Users Consultative Committees, under the Transport Act, 1947. The Committees which are part of eight now being appointed are for the North West, North East, West Midland, and East Anglia areas. The names of those who have, so far, accepted to serve on the Committees are shown below, as well as the Chairmen, who have previously been announced:—

#### *West Midland Area*

Brigadier J. Lane, (Chairman), a Member of the Post Office Board from 1947 to 1950.

Mr. F. B. Bent, Member of the National Farmers Union Headquarters Horticultural & Fruit Committees.

Mr. J. H. Scudamore, Member of the Herefordshire County Branch of the National Farmers Union and delegate to the Union's Headquarters Council.

Mr. C. E. Jordan, Transport Controller, T.I. (Group Services) Limited, a subsidiary of Tube Investments Limited.

Mr. G. O. Pritchard, Traffic Manager, British Thomson-Houston Co. Ltd.

Mr. H. Palmer, Transport Manager of the Shelton Iron, Steel & Coal Co. Ltd. (Iron Masters).

Mr. A. G. C. Trollope, Divisional Transport Officer, West Midlands Division, National Coal Board.

Councillor W. Nevill, Member of the Staffordshire County Council.

Alderman Major J. R. H. Harley, Member of the Herefordshire County Council.

Councillor G. H. Aldridge, Member of the Smethwick Borough Council for 9 years.

Alderman F. Bullock, Member of the Worcester Borough Council for 13 years.

Councillor A. M. Silcox, Member of the Dudley Borough Council for 10 years.

Mr. G. G. Beazley, Partner in the firm of Messrs. Gracie, Beazley & Company, Liverpool (Ship & Insurance brokers).

Mr. A. Pratt, Miners agent of the National Union of Mineworkers, Warwickshire.

Mr. L. V. Pike, District Organiser of the National Union of Agricultural Workers.

Mrs. E. Bayliss, Additional member nominated by the Minister to represent the ordinary travelling public.

Replies are awaited from three others who have been invited to serve on the Committee.

#### *North East Area*

Sir Mark Hodgson, (Chairman), General Secretary, United Society of Boilermakers and Iron & Steel Shipbuilders from 1936-1948 and President of the Confederation of Shipbuilding & Engineering Unions from 1943-1945 and from 1947-1948. Member of the General Council of the T.U.C. and services on a number of Government Committees.

Colonel M. D. Methven, Member of Executive Committee of Durham N.F.U. County Branch.

Mr. K. H. L. Cooper, Distribution Manager, Imperial Chemical Industries Limited, Billingham Division.

Mr. J. J. Brown, Transport Manager, Vickers Armstrongs Limited.

Mr. J. E. Peacock, Transport Manager, Cargo Fleet Ironworks.

Mr. S. J. Adamson, Divisional Railways & Staiths Superintendent, Durham Division, National Coal Board.

Mr. F. Burr, Area organiser, Transport & General Workers Union.

Mr. E. Stanley, Area organiser, National Union of Agricultural Workers.

Mr. J. N. Burrell, Manager & Director of Tyne-Tees Steam Shipping Co., Ltd.

Councillor D. Dawson, Chairman of the Highways Committee of Northumberland County Council and representative on numerous outside bodies.

Councillor W. Hirst, Member & Chairman of the Spennymoor Urban District Council.

Alderman T. W. Pinkney, Member, West Hartlepool Borough Council.

Councillor C. J. Tremewan, Member, Darlington Borough Council.

Mr. A. Patton, Miner. Additional Member nominated by the Minister to represent the ordinary travelling public.

Alderman E. E. Brennan, Mayor of Thornaby-on-Tees, 1932-1933 and 1949. Member of the Thornaby Borough Council and the North Riding of Yorks County Council. Additional member nominated by the Minister to represent the ordinary travelling public.

Replies are awaited from three others, who have been invited to serve on the Committee.

#### *North West Area*

Alderman H. Hodgkinson, (Chairman), Alderman of the Cheshire County Council and a former Alderman of the Macclesfield Town Council.

Mr. N. R. Bargh, Chairman of Lancashire N.F.U. Livestock & Wool Committee.

Mr. H. W. Smail, Traffic Manager, Lever Brothers, Port Sunlight Ltd.

Mr. F. Abbotts, Member of the Central Board of the Co-operative Union Limited.

Mr. W. H. Greenall, Transport Officer, Federation of Master Cotton Spinners' Associations, Limited.

Mr. W. D. Broadbent, Transport Manager of Rylands Bros. Ltd., Warrington.

Mr. T. J. Sales, Divisional Marketing Director, National Coal Board, North Western Division.

Mr. L. Highton, Managing Director, Workington Iron & Steel Company and director of other companies.

Miss L. Hodson, Trades Union Official of the National Union of Tailors & Garment Workers.

Alderman R. H. Jackson, Member of various committees of the Lancashire County Council.

Councillor J. D. Doyle, Member of the Derbyshire County Council and Glossop Borough Council.

Councillor K. L. Alban, Member, Barrow-in-Furness Borough Council.

Alderman T. Maxfield, Member, Burnley Borough Council.

Alderman E. Porter, Member, Blackburn Town Council. Additional member nominated by Minister. Ex Member of Parliament.

Replies are awaited from five others, who have been invited to serve on the Committee.

*East Anglia Area*

Captain W. H. Coombs, (Chairman), President of the Officers (Merchant Navy) Federation.

Mr. A. L. Fawkes, Vice-Chairman of the East Midlands Marketing Association, Mr. L. Childs, Past N.F.U. (Isle of Ely) County Branch Chairman.

Mr. W. G. O'Connor, Sales Manager of the Shredded Wheat Co. Ltd.

Mrs. E. B. Double, Member of a number of Boards of the Co-operative Union Limited.

Mr. L. A. Carey, Transport Manager of Reckitt & Colman.

Mr. A. C. Maton, Transport Manager, Ransomes, Sims & Jeffries Limited.

Mr. C. G. Stalley, Director & Manager, Great Yarmouth Shipping Co. Ltd.

Mr. E. J. Harding, Building Trades Group Officer, Transport & General Workers Union.

Mr. W. J. Bird, Vice-Chairman, Chelmsford District Committee, East Regional Board, National Union of General & Municipal Workers.

Councillor T. Skelton, Member of the Bedfordshire County Council & Chairman of the Luton Borough Transport Committee.

Councillor S. C. Lawrence, Member of the Isle of Ely County Council.

Alderman H. A. Maxfield, Member of the Hertfordshire County Council.

Alderman E. N. Selby, Chairman, the Transport Committee, Southend-on-Sea Borough Council.

Mrs. M. H. Neal, Member of the East Suffolk County Federation of Women's Institutes Executive Committee, Additional member nominated by the Minister to represent the ordinary travelling public.

Mr. J. D. Lusty, Additional member nominated by the Minister to represent the ordinary travelling public.

A reply is awaited from one other, who has been invited to serve on the Committee.

## Southern Region Operating and Motive Power Dinner

### Presentation to Mr. John Elliot

A dinner was held by the Operating and Motive Power Departments of the Southern Region, British Railways, in London on February 19. Mr. T. E. Chrimes, Motive Power Superintendent, was in the chair, supported by the Superintendent of Operation, Mr. S. W. Smart. There were 122 present. The principal guests were Mr. John Elliot, Chairman of the Railway Executive, and Mr. C. P. Hopkins, Chief Regional Officer. Mr. Smart extended a welcome to Mr. Elliot and presented him with a print of the "Golden Arrow" as a reminder of his days with the Southern Railway.

Mr. Smart stressed that the first essential for the success of any railway was reliable motive power allied with close co-operation between departments at all levels. These conditions obtained in a high degree in the Southern Region. He extended his thanks to Mr. Chrimes and his staff for this satisfactory state of affairs.

Mr. Chrimes, replying, agreed that co-operation between the two departments had never been better and that his staff at all levels were pleased to play their part in securing the punctual and efficient working of the train service.

Mr. A. E. Hoare, Assistant Motive Power Superintendent, proposed the health of the guests, and Mr. John Elliot responded, pointing out the difficulties of

the Regions in surmounting their varied problems in moving passengers and freight so that the industry of the country went forward to its maximum extent. With goodwill all round he was confident that an honourable solution would be found to their present labour problem and that the railways would subsequently do all that was required of them in serving the public as part of British Transport generally.

Mr. C. P. Hopkins, Chief Regional Officer, congratulated the departments on their performance, and on the co-operation between them which made those results possible.

## Naming Ceremony for Locomotive "Ellerman Lines"

The thirtieth and last of the "Merchant Navy" class 4-6-2 type locomotives of the former Southern Railway designed by Mr. O. V. S. Bulleid, No. 35029, was named *Ellerman Lines* at Southampton Docks on March 1, at a ceremony performed by Mr. A. F. Hull, Chairman of Ellerman Lines Limited. Mr. R. P. Biddle, Docks & Marine Manager, Docks & Inland Waterways Executive, Southampton, introducing Mr. Hull, said that this and other locomotives had been named after famous shipping lines as a tribute to the devotion to duty of the men of the Merchant Navy during the war; he then mentioned Ellerman Lines' war record, with 60 ships sunk out of a pre-war total of 105, and a present fleet of 90, with more vessels building.

Replying, Mr. Hull said that the problems of shipowners were in some ways similar to those of the railways. Their war losses were now replaced. They were building new ships, which he hoped would be as successful as the new locomotives. Mr. Hull then wished a successful career to No. 35029, and unveiled the nameplate bearing the house flags of the Ellerman Lines.

The ceremony was followed by a luncheon on board British Railways s.s. *Isle of Guernsey* after which Mr. Biddle presented Mr. Hull with a coffee table and a photograph of the locomotive as a memento of the occasion. Addressing the gathering, Mr. S. W. Smart, Superintendent of Operation, Southern Region, said that the engine *Ellerman Lines* was the last of the "Merchant Navy" class, the future of which was uncertain. Other speakers were Mr. T. E. Chrimes, Motive Power Superintendent, Southern Region, and Mr. A. Earle Edwards, District Traffic Superintendent, Southampton.

Others present included:—

Messrs. L. S. Lloyd, D. Martin-Jenkins, A. J. Stewart Todd, and C. F. Pratt, Directors of Ellerman and associated lines; Messrs. W. H. F. Mepsted, Commercial Superintendent, and F. D. Y. Faulkner, Public Relations & Publicity Officer, Southern Region, and Messrs. W. H. Nicholson, District Motive Power Superintendent, and K. H. Morris, Locomotive Works Manager, Eastleigh; Messrs. S. H. Isaac, Assistant Marine Manager, Southampton, and E. Hyman, Area Secretary, Transport & General Workers' Union, Southampton.

**LEYLAND MOTORS LIMITED**—The consolidated balance sheet of Leyland Motors Limited at September 30, 1950, shows that the total assets of the group increased during the year from £12,892,000 to £13,776,000, with an advance in property and plant from £2,240,000 to £2,450,000, and in current assets from £10,528,000 to £11,207,000. The total turnover of Leyland Motors for 1950 at £15,721,000 shows an increase of 182 per cent. over that of 1938. During the same period total vehicle invoiced deliveries increased in quantity by 27 per cent. and in value by 176 per cent. Net profits increased by 88 per cent. and the gross ordinary dividend return on the equity capital fell from 10.9 per cent. to 4.5 per cent.



Mr. R. P. Biddle (left) and Mr. A. F. Hull at locomotive naming ceremony at Southampton (see article above)

## Technical Advertising

### Some notes on Metrovick publicity work

At a meeting of the Incorporated Advertising Managers' Association in London on February 20, Mr. E. E. Walker, Manager of the Publicity Department of the Metropolitan-Vickers Electrical Co., Ltd., read a paper on the subject of technical advertising, based on notes prepared for a series of talks to Metrovick sales engineers.

Mr. Walker said that publicity was salesmanship by the printed word, and the publicity department was a part of the sales force, as were the sales departments themselves and the district office salesmen. The activities of the publicity department had for their objective the selling of products, and every publicity man was a salesman. By the spoken word, or by the written word, in correspondence or in print, the world must be told, for whatever was made, nobody would want it unless he was told about it.

Even when it was highly technical apparatus, prospective users must be informed, and that was the part the publicity had to play, and the salesmen too. The difference between sales and publicity was that the salesmen approached individuals and publicity was directed to large audiences. The salesmen dealt with a particular job, but publicity spread information to all who came within the scope of the media used. He had been told that everybody knew Metrovick, but this would be true only when everyone had been told, by visits of salesmen, correspondence by the sales departments, and by publicity which reached prospects unknown to correspondents and unvisited by salesmen.

There were non-technical products intended for the "world of consumers" and there were technical products which were intended for the "world of non-technical consumers." Highly technical products were sold to the "world of technicians, scientist, and engineers." Just as the technique of preparing advertising of products for the non-technical consumer, differed from the advertising of non-technical products for the ordinary consumer, so the advertising of highly technical products differed even more from that of the other two classifications.

Mr. Walker then gave a brief explanation of the Metrovick organisation. At the works there were 14 separate departments, each under the control of a superintendent on the manufacturing side, a chief engineer, and a sales manager. The publicity department was responsible for "telling the scientific world" about their scientific products, and was roughly divided into three creative sections and a number of service sections. The creative sections operated in three spheres of influence, namely, the press, display, and publications. Some apparatus was not of any use until the buyer had an instruction book, and they sometimes ran to large books, such as those for the electron microscope, and for the South African Railways. The preparation of the instruction books, and all the literature, entailed many considerations, and the work on each individual leaflet proceeded through many stages: discussion with departmental sales manager; draft from technician concerned; first reading of type-script; suggested modifications, and so on. This section was also responsible for the *Metropolitan-Vickers Gazette* which was published monthly.

The press section had the largest share of the budget. The daily press was not economic for regular advertising of technical products for many reasons. They were

advertising as engineers to engineers, technicians to technicians, and the percentage of technical readers of the daily press was low, but the space cost was in proportion to the circulation. Technical journals were much lower in cost than the daily press. Furthermore, the dailies were thrown away after an hour or two, and any message they were trying to put out could not be absorbed in such a short time. Weeklies might last perhaps a week, where-

as technical journals generally were stored away, filed, and referred to from time to time. They advertised regularly in 189 journals, mainly technical, and in 1949 they inserted 2,175 advertisements.

Also under the control of the publicity department were visits to the works. The management had found that the best exhibition in the country was the Trafford Park works, and visitors, particularly from overseas, were encouraged to go and see the works. A section of the publicity department was devoted to looking after them. In 1949 they entertained 18,143 visitors and a tour programme was arranged and printed for 1,024 parties.

## Easter Train Services

As announced in last week's issue of *The Railway Gazette*, British Railways will restore over the Easter holiday the principal main-line and cross-country trains cancelled during the last few weeks as a coal economy measure; reservation of seats is being reintroduced for all services for which this would normally apply; and there will be the usual excursion train facilities on the public holidays and certain other days.

In the Western Region main-line and connecting branch-line trains recently withdrawn will be restored on March 19-31. In addition, 290 special trains, including 190 to and from Paddington will run on March 21-28. Special trains to principal stations in South Wales will start from Ealing Broadway on March 22, in accordance with previous practice at bank-holiday periods. Additional trains will be run on March 21 and 22. On March 23 (Good Friday) the normal Sunday service will operate with certain amendments; special trains will be run and special connections from long-distance overnight trains arranged on some branch lines, with bus connections in some cases. On March 24

generally strengthened weekday, and on March 25 (Easter Sunday) modified Sunday services will operate, and on Easter Monday and Tuesday many special trains will be run to Paddington and elsewhere. On March 28 (Wednesday) normal services will be augmented. Throughout the holiday there will be many day and half-day excursions. Steamer services to and from Fishguard to Irish ports and from Weymouth to the Channel Islands will run as usual, except for cancellation of the Fishguard-Waterford sailings westbound on the night of March 23 and eastbound the following night.

Similar arrangements will obtain in the other Regions. Principal trains cancelled in January and February, to be restored on certain days during the Easter holiday include:

**Eastern Region:** "Queen of Scots Pullman" (Kings Cross-Glasgow); "South Yorkshireman" (Marylebone-Bradford); also certain services to and from East Anglia.

**London Midland Region:** "Midlander" (Euston-Wolverhampton); also certain Euston-Liverpool, Euston-Manchester, Anglo-Scottish (Western and Midland Division), and Midland Division (to and from St. Pancras) expresses.

**Southern Region:** "Atlantic Coast Express" (Waterloo-Ilfracombe); also certain Kent Coast and Hastings steam services.

**Western Region:** Certain Paddington-Wolverhampton and Paddington-South Wales expresses.

In addition, many cross-country services affecting two or more Regions will be restored during the Easter period.



## YOUR TRAINS RUNNING AGAIN FOR EASTER

As from Monday, March 19th, to Wednesday, March 28th, inclusive, British Railways will restore the **PRINCIPAL MAIN LINE TRAINS** which were recently withdrawn together with the connecting services. Seats can be reserved on many trains as before. Relief trains will also be run as required.

THE USUAL HOLIDAY PROGRAMME OF EXCURSION TRAINS WILL BE PROVIDED ON GOOD FRIDAY, EASTER SUNDAY AND MONDAY.

BRITISH RAILWAYS

Railway Executive poster announcing restoration of train services at Easter (see article above)

**SOUTHERN REGION LECTURE & DEBATING SOCIETY.**—A Continental tour has been arranged by British Railways, Southern Region, Lecture & Debating Society, between May 10 and 17. It is intended to visit Brunnen, Zurich and Basle, and a number of optional technical visits will be included in the programme.

**LONDON TRAFFIC PROBLEMS.**—A five-year plan to relieve traffic congestion in Inner London is proposed by the London & Home Counties Traffic Advisory Committee in a report to the Minister of Transport. The report follows a comprehensive study of London traffic problems in the course of which memoranda submitted by over a score of associations and authorities were considered. It analyses the causes of congestion and makes 56 recommendations. The report, which includes plans of proposed road improvement schemes, is published by H.M. Stationery Office, price 2s.

## Parliamentary Notes

### London-Southend Train Service

The question of transport facilities between London and Southend was raised on the motion for the adjournment of the House of Commons on February 16 by Mr. S. J. McAdden (East Southend—C.). Southend, he said, was both a dormitory town and a seaside resort, and an efficient train service between Southend and London was therefore essential.

After citing the double-track line of much of the Eastern Region Tilbury Section as an unavoidable bottleneck, Mr. McAdden said the present train service was deplorable. The trains were filthy, and rarely ran to time. The condition of the locomotives also was deplorable; he made no complaint about the motive power staff, who accomplished miracles with locomotives which ought to be withdrawn from service. He then referred to the representations made by the Railway Travellers' Association to the railway authorities to improve the motive power position. The real trouble, he continued, was the inefficient maintenance system and lack of a sufficient number of Class "4" engines. He then criticised the working conditions in engine sheds on the Tilbury Section, and referred to the surplus of locomotives (including newly-built ones) in the Southern Region in contrast to the Southend line.

The railway authorities, continued Mr. McAdden, had not co-operated with the Railway Travellers' Association or the Southend authorities. Regarding the recent train cancellations, he understood that the various Regions had been instructed to make a 4 per cent. cut; but the Southend line, one of the most profitable in Britain, had had a 15 per cent. cut.

### Transfer of Tilbury Line to L.M.R.

The Minister of Transport should consider transferring the Southend line back to the L.M.R., in which (he understood) the motive power could solve the problem. Two Regions (the Eastern Region via Shenfield and the L.M.R. Tilbury Section) serving the same town would mean healthy competition.

Mr. Alfred Barnes (Minister of Transport) gave a general assurance that he would examine each of the points in detail and see that they went before the Railway Executive. As to the cuts in the services, they were justified by the need to save coal supplies over the next few weeks, and were not really the responsibility of the railways. He was assured it was not the case that there had been a 15 per cent. cut on the Southend line, against a 4 per cent. cut elsewhere.

### Electrification of Tilbury Section

The B.T.C., continued Mr. Barnes, had been authorised to electrify the Tilbury Section as soon as economic conditions permitted. Although it did not solve the Southend problem, on the suburban lines of the old L.N.E.R. to Shenfield, there had been a similar position. Locomotives and coaching stock had been worn out, and that condition had remained for some years. It had not been desirable to spend money on new coaching stock and steam locomotives for that line when it was the intention to electrify it. Now, since electrification, travel over that section had been entirely transformed. If there was any surplus stock of Class "4" engines which could assist the problem he would have that matter looked into. Consultation with local authorities and interests had not been possible when a quick decision had to be made on coal economies. He recognised

clearly that the public must have a voice in the matter when Parliament had established a complete monopoly in the railways. Almost immediately an announcement would be made of the setting up of a Consultative Committee for the East Anglian area, and he had chosen a representative from Southend to serve on this committee.

### Passenger Train Cuts

Mr. James Harrison (East Nottingham—Lab.), on February 21 raised the question of railway passenger service restrictions. The total consumption of coal by British Railways was, he said, about 290,000 tons a week and the economy expected from the recent cuts in passenger services amounted to about 10,000 tons a week. To achieve that, some 3,000-5,000 trains had been cut. The Government had instructed the railways to curtail services. The small coal economy effected did not justify the inconvenience to the public. He hoped that the Minister of Transport could make a firm statement on the ending of the restrictions, in view of impending Easter and summer traffic.

The Minister of Transport said that the railways had to make their contribution to the coal economy scheme in the same way as thousands of industrial undertakings, simply because there was not sufficient coal to go round. He disowned responsibility for any financial losses because the Government could not meet any loss suffered by any private industrial undertaking, and therefore they could not apply a different principle to railways.

As to the question of how long the cuts were likely to continue, Mr. Barnes said obviously it would be only so long as the cut in supplies, not only to the railways, but to general industry, operated. Without committing himself to any definite date, they knew that the coal year came to an end towards the end of March, and it should be possible to restore those services to meet the Easter holiday requirements and requirements from then onwards.

## Questions in Parliament

### Railway Wages

Mr. Anthony Eden (Warwick & Leamington—C.): On February 26 asked the Minister of Transport whether he had any statement to make as to the effect of the railway wages settlement on fares and freight rates and whether he contemplated any action in the matter.

Mr. Alfred Barnes: The effects of the railway wages settlement and other recent increases in wages and costs are under consideration by the B.T.C., but I am not yet able to say what action is to be taken.

Mr. Eden: I am sure the Minister will realise how important it is that the House and the country should know the position as soon as possible. Can he say when he hopes to be able to make a statement?

Mr. Barnes: No. I recall the great interest which the House took in this matter on the occasion of the last increase, and it is only right that every aspect of the problem should be thoroughly examined by the Government before we come forward with any recommendations.

Mr. Peter Thorneycroft (Monmouth—C.): Can the Minister say whether the B.T.C. will make an application to the Transport Tribunal or whether he himself will merely consult it in an advisory capacity and make what is known as a transitional order, and whether, in either case, there will be an opportunity for those in-

terested to give evidence or to hear the arguments?

Mr. Barnes: I have stated that the matter is still under consideration by the B.T.C. Until I receive any representation from the B.T.C. I do not see the purpose of answering hypothetical questions.

Mr. Fenner Brockway (Eton & Slough—Lab.): Will the Minister say whether, among the aspects of the matter which the Government will consider, they will consider transference to the National Debt of the amount paid to the shareholders of the old companies rather than making it a charge on the railways themselves?

Mr. Barnes: That, again, appears to be taking us into the realm of consideration not immediately relevant.

### Coal Supplies to Railways

Mr. Bernard Braine (Billericay—C.) on February 26 asked the Minister of Fuel & Power when he proposed to re-allocate to the railways sufficient coal to restore the cuts in passenger services.

Mr. Philip Noel-Baker stated in a written answer: The present restrictions on the supply of coal to the railways will continue only as long as required to provide coal for the domestic consumer.

### Iron & Steel Corporation

Mr. F. J. Erroll (Altrincham and Sale—C.) on February 19 asked the Minister of Supply whether he had yet received the resignation of those members of the Iron & Steel Corporation who were appointed primarily for the purpose of securing the vesting of the privately owned industry; and what steps was he taking to appoint new members to enable it to carry out its functions.

Mr. George Strauss in a written answer stated: I cannot accept the implication of this question. I have not received, nor do I expect, any resignations from members of the Iron & Steel Corporation, whose appointments, with one exception, run from three to five years. In reply to the last part of the question I am not at present making further appointments.

### Air Services During Railway Strike

Mr. F. J. Erroll (Altrincham & Sale—C.) on February 28 asked the Parliamentary Secretary to the Ministry of Civil Aviation if, in view of the likelihood of widespread dislocation of railway traffic due to intended strike action, he would make a statement on plans for daily air passenger services between London and Manchester and other provincial centres immediately a strike began.

Mr. Frank Beswick (Parliamentary Secretary to the Ministry of Civil Aviation) in a written answer stated: It would not be in the public interest to make such a statement.

### Retired Indian Railway Employees

Sir John Mellor (Sutton Coldfield—C.) on February 15 asked the Secretary of State for Commonwealth Relations, why, in view of the continued default of the Government of India, he had failed to implement his guarantee in Command Paper 7192, 1947, supplemented by letter dated January 29, 1948, of India's liability to pay to Mr. F. M. G. Wheeler, formerly of the Indian State Railway Service, £5,767 14s. 7d., which became due on December 15, 1949, from the Railway Provident Fund; and if he would forthwith discharge this obligation with interest from the due date.

The Prime Minister, on behalf of Mr. P. C. Gordon Walker, wrote in reply: Our High Commissioner in India has reported

that the Government of India has now agreed to pay Mr. Wheeler the sum due to him. The question whether interest is being paid is being taken up with the Government of India.

#### New Railways in Africa

Mr. C. J. Alport (Colchester—C.) on February 21 asked the Secretary of State for the Colonies whether the initial survey of the railway link between the Northern Rhodesian and East African railway system was now complete.

Mr. Griffiths in a written answer stated: A preliminary survey was completed in November, 1949. A detailed engineering survey is now in progress and arrangements are almost complete for a complementary development survey.

## Staff & Labour Matters

### Railway Shopmen

The question of pay increases for railway shopmen was considered at a meeting of the Railway Shopmen's National Council on February 28. The employees' representatives on the council intimated that they were unable to accept the offer of the Railway Executive which was made at an earlier meeting of the council. Since that date developments have taken place and conciliation and salaried staff have received certain pay increases to which reference was made in our last week's issue.

In consequence, revised proposals were submitted by the Railway Executive at the meeting of the council on February 28, containing suggested increases in wages ranging from 8s. 6d. to 10s. a week. There were certain points on which it was not possible to reach final agreement, and the meeting was adjourned until Tuesday, March 6, to enable both sides to consider these points.

The result of this meeting on March 6 was that the revised proposals were accepted. It is estimated that the increases, which will affect about 120,000 men, will cost £3,000,000 a year.

### Efficiency Committee

Arising out of the recent wage negotiations between the Railway Executive and the three railway trade unions, the special joint committee which it was agreed should be set up without delay to increase efficiency, improve productivity within the railway industry, and eliminate waste of manpower, held its first meeting at the Railway Executive headquarters on March 5.

The Chairman of the committee is Mr. W. P. Allen, Member of the Railway Executive responsible for Staff & Establishment. Other representatives of the Railway Executive are Messrs. H. Adams Clarke, Chief Officer, Staff & Establishment; S. E. Parkhouse, Chief Officer, Operating; R. F. Harvey, Chief Officer, Motive Power; and A. A. Harrison, Executive Officer, Road Transport.

### Engineering Piecework Dispute

The action taken by certain firms in dismissing or threatening to dismiss employees who have refused to work overtime or piecework is likely to cause a spread of the ban to other firms. Representatives of Vickers-Armstrongs, Limited, have decided to recommend an immediate ban on piecework and overtime. The recommendations were considered by the works committee at a meeting which was held on March 5.

## Second British Railways Standard Pacific Locomotive Named "Lord Hurcomb"

*B.T.C. Chairman on accelerated services in East Anglia*

At Liverpool Street Station on March 6, No. 70001, the second of the British Railways "Britannia" Class standard mixed traffic locomotives was named *Lord Hurcomb*. The naming of the first of the class, *Britannia*, by the Minister of Transport on January 30, was recorded in our February 2 issue.

On the invitation of Mr. John Elliot, Chairman of the Railway Executive, Lord Hurcomb, Chairman of the British Transport Commission, unveiled the nameplate. He said that he accepted the compliment of having the second standard locomotive of British Railways named after him not as paid to him personally but, through him, to all the 390,000 employees of the British Transport Commission. The introduction on the Liverpool Street main-line services of the "Britannia" Class locomotives, the largest and most powerful yet put into service on the former Great Eastern system, would enable the service to Ipswich, Norwich, and the Norfolk Coast to be substantially improved.

### Accelerations in East Anglia

The fastest trains would be accelerated about 10 min. to and from Norwich and several of the secondary expresses calling at the larger towns *en route* would be accelerated by from 20 to 40 min. During the summer one of the first sets of British Railways new standard main line rolling stock would be introduced on the "Norfolkman" between Liverpool Street and Norwich and it was hoped to provide modern stock for other expresses. The new locomotives would be used on the "Day Continental" service between Liverpool Street and Parkeston Quay—one of the gateways to the Continent through which British Railways handled a substantial and valuable revenue-earning traffic.

Lord Hurcomb congratulated the Railway Executive, and in particular Mr. Riddles and all those who had been engaged in the design and production of the locomotives in time for service during Festival of Britain year. In this and many other technical directions much progress had been made during the last three years, and much more was planned. In due time the standardisation and modernisation of rolling stock, plant, and equipment generally would yield substantial economies, but not until a sufficient proportion of the stock had in fact been replaced would it be possible to take advantage of all the operating economies which they would eventually secure. It was not sufficient to produce efficient units of transport, and, in particular, fine modern locomotives; they had to see that they were fully and economically used in doing the work for which they were intended.

Among those who accepted invitations to the ceremony were:—

### British Transport Commission

Mr. John Benstead; Lord Rusholme; Messrs. Miles Beevor; J. H. Brebner; S. B. Taylor; Dr. H. E. Merritt; Messrs. F. Gilbert; and M. R. Bonavia.

### Railway Executive

Messrs. V. M. Barrington-Ward; R. A. Riddles; J. C. L. Train; General Sir Daril Watson; Messrs. E. G. Marsden; V. Radford; A. J. Pearson; J. L. Harrington; H. H. Phillips; R. H. Hacker; S. E. Parkhouse; R. F. Harvey; R. C. Bond; E. S. Cox; and D. S. M. Barrie.

Messrs. C. K. Bird, Chief Regional Officer, Eastern Region; J. W. Watkins, Chief Regional Officer, London Midland Region.

Messrs. Delory, Director General, Belgian National Railways; Laloni, Chief Commercial Manager, Italian State Railways; Lucchini, President, Swiss Federal Railways; Dr. Pischel, Ministerial Director, German Railways; Dr. Wansink, Director General, Netherlands Railways; and Mr. Verlot, General Manager, Interfrigo.

## Contracts & Tenders

The Siemens and General Electric Railway Signal Co. Ltd. of London has received a contract for the supply and installation of automatic signalling and interlocking equipment on the Yonge Street Subway, now under construction for the Toronto Transport Commission.

The contract will be carried out in conjunction with the company's Canadian representatives, Radio Engineering Products Limited of Montreal, which will be responsible for the installation under supervision of British engineers. This is the first railway signalling contract to be secured by a British firm in Canada. The value of the work is approximately 1,200,000 Canadian dollars, and is to be carried out in a period of 2½ years.

The main items of equipment to be supplied will comprise automatic colour-light signals, electric point machines, electrically operated train stops and three relay interlocking panels for the control of signals and points from signalboxes. All the associated relays will be of a recently developed S.G.E. detachable plug-in type designed for easy replacement.

An order for 18 diesel-electric shunting locomotives has recently been placed with the British Thomson-Houston Co. Ltd. by the Western Australian Government Railways. The main sub-contractor is the Clayton Equipment Company, and the locomotive will be built at this company's works, at Hatton, Derbyshire. The diesel engine on each locomotive will be a Paxman Type 12-RPL, derated to 400 b.h.p. at 1,250 r.p.m.

It was recently stated in the Board of Trade, Commercial Relations & Exports Department, Special Register Information Service, that the Commercial Counsellor at the British Embassy, Tehran, has reported a call for tenders issued by the Iranian State Railways for the following machinery and equipment:—

2 Tamping machines and 1 screening machine for track of 1,435 mm. gauge; 20 Trolleys with 4 and 8 cylinders (according to drawing); 5 Trolleys for inspecting faults in the track; 35 Tricycles for track with complete brake; 60 Waggonettes for transport on the track with complete brake and 4 wheels; 1 Machine for undercutting the rails; 1 Machine for welding rails; 2 Mobile motor-compressors.

Tenders should reach the Manager, Works Department ("Karpardazi"), Iranian State Railways, Tehran Station, Tehran, Persia, by April 5, 1951. A copy of the tender documents and drawing is available for inspection by interested United Kingdom manufacturers at the Commercial Relations & Exports Department, Board of Trade, Thames House North, Millbank, S.W.1.

## Notes and News

**Swedish Fares Increased.**—Fares on the Swedish State Railways will be increased between six and 15 per cent. from May 1.

**Temporary Technical Assistant Required.**—A temporary technical assistant is required for a railway civil engineer's drawing office in London. See Official Notices on page 283.

**Spring Shop Foreman Required.**—A spring shop foreman, with experience in the manufacture of laminated, helical and volute railway springs, is required by a railway carriage and wagon works in India. See Official Notices on page 283.

**Senior Designer Required.**—Applications are invited for the post of senior designer required by British Insulated Callenders Cables Limited, at its Prescott Works, for the electro-mechanical design of overhead equipment for trolleybus and railway traction. See Official Notices on page 283.

**Higher Charges for Restaurant Car Meals.**—The Hotels Executive has reluctantly been compelled to increase the prices of certain meals in restaurant cars, namely, luncheon and dinner from 5s. to 6s., and afternoon tea from 1s. 6d. to 2s. These revised charges came into effect from March 5. Passengers may obtain snack boxes in the refreshment rooms on all principal stations at prices varying from 2s. 3d. to 3s. 6d.

**Euston Rifle Club: Presentation.**—Mr. John Elliot, Chairman of the Railway Executive, recently presented a new 0-22 rifle to the Euston Rifle Club, subscribed for by Mr. Elliot and senior officers of the London Midland Region. After the presentation there was a sweepstake. The winner, Mr. F. W. Abraham, Motive Power Superintendent, gave his prize to the

club, and the club presented Mr. Abraham with a silver tankard, while a silver spoon was presented to the runner-up, Mr. J. W. Watkins, then Operating Superintendent. This year the club, which was founded in 1907, has won the London Railway Rifle League championships and the Harrison Shield, and the club champion, Mr. W. Grant (St. Pancras) scored 996 out of 1,000 in the London Railways League. The club is open to all male and female staff in the London area.

**The Engineers' Guild.**—The address of the Engineers' Guild, whose work in the interests of chartered engineers in this country and abroad was referred to in our February 9 issue, has been changed to Abbey House, 2, Victoria Street, London, S.W.1, Telephone No. Abbey 7315/6.

**Railcar Gearbox as Festival Exhibit.**—Among the special exhibits chosen by the Council of Industrial Design for display during the cruise of the Festival of Britain ship *Campania* is a self-changing railcar four-speed air-operated gearbox. This is similar to those supplied by the Self-Changing Gear Co. Ltd. for use in Peru, Australia, Scandinavia, and Northern Ireland.

**G.W.R. (London) Operatic Society.**—On Wednesday, Thursday, Friday and Saturday last the Great Western Railway (London) Operatic Society presented Lionel Monckton's colourful musical play, "The Quaker Girl." The production was one of the liveliest and best presented of any that the Society has put on during its thirty years of existence. It completely justified the confidence placed by the producer, Mr. Frederick G. Lloyd, in the ability of its members, who are drawn from the clerical staff at Paddington and who had the distinction of being the first amateur operatic society chosen to feature in a B.B.C. tele-

vision programme. Excellent performances were given by Vera Flatman, in the title role, Ronald Ratcliffe as Tony Chute, Joyce Hewitt, Dorothy Lees, Jane Mundy and Edna Sherbourne as Princess Mathilde, Madame Blum, Phoebe and Diane, and by Frederick Toon, Walter Jenkins, Herbert Mason and George Clarke as Captain Charteris, Jeremiah, Monsieur Larose and Prince Carlo.

**Institute of Transport.**—At a meeting of the Institute of Transport to be held at the Jarvis Hall (R.I.B.A.), 66, Portland Place, London, W.1, at 5.45 p.m. on March 19, Mr. A. F. R. Carling will read a paper on "Management and the Size of the Operating Unit."

**Railway Clerks' Association: Change of Name.**—In view of the extended field of recruitment of the R.C.A. since its formation nearly 54 years ago as an organisation for railway clerks only, the R.C.A. annual conference decided last year in favour of a new name, to which the Registrar of Friendly Societies has given his approval. The Railway Clerks' Association now becomes the Transport Salaried Staffs' Association.

**B.E.T. Acquires More Welsh Bus Companies.**—The British Electric Traction Co. Ltd. has acquired the share capital of Thomas Bros. (Port Talbot) Ltd. and the Afan Transport Co. Ltd., operators of omnibus services in the Port Talbot area of Glamorgan. The former directors of the two companies have retired and have been replaced by B.E.T. representatives. Mr. W. T. James, a director of the B.E.T., is the new chairman of both companies.

**Railway Students Association.**—In our March 2 issue, the meeting of the Railway Students Association at which Mr. David Blee, Member, Railway Executive, will read a paper on "The Commercial Field for the Student of Transport," was, due to a printer's error, incorrectly shown as taking place on March 4. The meeting, which is at the London School of Economics & Political Science, Houghton Street, W.C.2, will be on March 14, at 6 p.m.

**British Railways (Southern Region) Lecture & Debating Society.**—On February 28, at the Chapter House, London Bridge, Mr. F. G. Dawson, Overseas Manager of the Workers' Travel Association Limited, lectured to the British Railways (Southern Region) Lecture & Debating Society on "The Agent's Part in Travel Promotion." Mr. R. E. Sinfield, Continental Superintendent, Southern Region, was in the chair. The lecture was followed by films of Switzerland, including: a W.T.A. centre on Lake Lucerne; Zurich and Lucerne; the famous Susten Pass road; and Swiss towns. Mr. Dawson outlined the development of the W.T.A. from modest beginnings 28 years ago to its present position as one of the largest agencies and said that they were grateful for the way in which its early steps had been guided by the Southern Railway.

**Sligo, Leitrim & Northern Counties Railway.**—At the annual meeting of the Sligo, Leitrim & Northern Counties Railway Company Captain the Hon. W. J. French, Chairman, said that a company which year after year had to increase its debit balance could not continue to function indefinitely. They were aware, he said, of the interest of both the Dublin and Belfast Governments in railways, but what the coming year would bring in regard to the Company he could not forecast. In 1950 there was a loss in working of £4,101, as compared



Mr. John Elliot, Chairman of the Railway Executive, accompanied by (left) Mr. J. W. Watkins, then Operating Superintendent and now Chief Regional Officer, London Midland Region, presenting a new rifle to Mr. E. Kent, Captain of the Euston Rifle Club (see paragraph above)

## OFFICIAL NOTICES

WE buy used or unserviceable Steel Files at good prices, in lots of 2 cwt. or more. THOS. W. WARD, LIMITED, R.S. Department, Albion Works, Sheffield.

**GLOSSARY OF WOOD.** A technical dictionary for all associated with timber and its uses. Ten thousand terms about timber—the common and the little known, the old and the new. Ten thousand definitions covering the entire field of timber and its uses—growth, marketing, utilisation. The commercial timbers, their qualities and uses, tools and wood-working equipment, are all here explained simply, concisely and accurately. Illustrated by many clear line drawings. Price 21s. net. By post 21s. 9d. Tenthill Press Limited, 33, Tenthill Street, London, S.W.1.

**SENIOR DESIGNER** required by British Insulated Callenders Cables Limited at their Prescott works for the electro-mechanical design of overhead equipment for trolleybus and railway traction. Permanent position with superannuation and bonus schemes after twelve months' probationary service. Salary £650 per annum. Applications giving details of qualifications and experience should be made in writing to the STAFF OFFICER, B.I.C.C. LIMITED, Prescott, Lancs.

**RAILWAY MAINTENANCE PROBLEMS.** By H. A. Hull (late District Engineer, L.M.S.R.). Valuable information. With much sound advice upon the upkeep of permanent way. Cloth, 84 in. by 54 in. 82 pp. Diagrams, 5s. By post 5s. 3d. The Railway Gazette, 33, Tenthill Street, London, S.W.1.

**SPRING SHOP FOREMAN**, with experience in the manufacture of laminated, helical and volute railway springs, required by Railway Carriage and Wagon Works in India. Four years' contract, salary according to qualifications, passages for family, quarters, provident fund and free medical attention. Apply, in writing, giving full details of experience, to Box No. 692, c/o W. Abbott, Limited, 32, Eastcheap, London, E.C.3.

**DIRECTORY OF RAILWAY OFFICIALS & YEAR BOOK.** A useful reference book for railway officers, engineering firms, and all who do business with railways. The only Directory which enables one to find the right railway and the right officer at the right moment. Issued July each year. Price 30s. net. Tenthill Press Limited, 33, Tenthill Street, London, S.W.1.

with £2,498 in 1949. The loss was reduced by a grant-in-aid given by the Northern Ireland Government and other miscellaneous receipts to £2,022, as against £495 in 1949. The debit balance carried forward to next year's account was £40,225, an increase of £4,972 over last year's figures. Two factors contributed to a fall in road revenue; weather conditions in summer months were not conducive to the movement of passengers, and lorry services were not engaged to the same extent by local authorities as in 1949.

**Spurn Head Railway to be Closed.**—The light railway, nearly four miles long, from Kilmsea to Spurn Head, north of the Humber, is to be closed. The line has no physical connection with the North Eastern Region of British Railways. In recent years it was worked by a sail-driven trolley for passengers (largely Spurn Head lifeboatmen) and a converted motorcar for conveying stores.

**Week-End Cruises by S.S. "Falaise."**—Week-end cruises by the Southern Region steamer *Falaise* will be run again this year, commencing at the Whitsun weekend, Friday, May 11. The programme for 1951 will include cruises from Southampton to Havre, Jersey, Guernsey, St. Malo, Cherbourg, and up the Seine to Rouen. There will be six cruises in all, and passengers will entrain at Waterloo at 7.20 p.m. on Friday, and return at 9.28 a.m. on Monday mornings. The long Whitsun weekend cruise will leave London on May 11 and return on May 15. As in former years fares from Southampton will be from £12 12s. for the Whitsun cruise and from £9 9s. for all the others (£13 13s. and £10 10s. from London). These fares include accommodation and all meals on board. Bookings commenced on March 1.

**Associated Electrical Industries.**—For the year ended December 31, 1950, the directors of Associated Electrical Industries Limited are recommending an increase in the distribution on the £6 million ordinary stock of 5 per cent. The final dividend recommended is 15 per cent., against 10 per cent. for the previous twelve months, making 20 per cent., less tax, for the year, as compared with 15 per cent. Consolidated profit on trading totalled £8,440,000, compared with £7,602,000, and, with the addition of dividends and profit on sale of investments and so on, the total group profit is brought up to £8,605,000, against £7,762,000 last year. In addition to the usual depreciation a further sum of £950,000 has been set aside from the profits towards the increased replacement cost of fixed assets. It is proposed to reduce the cumulative dividend rate on the £2,669,240 preference stock from 8 per cent. to 4½ per cent. In return the preference stock-

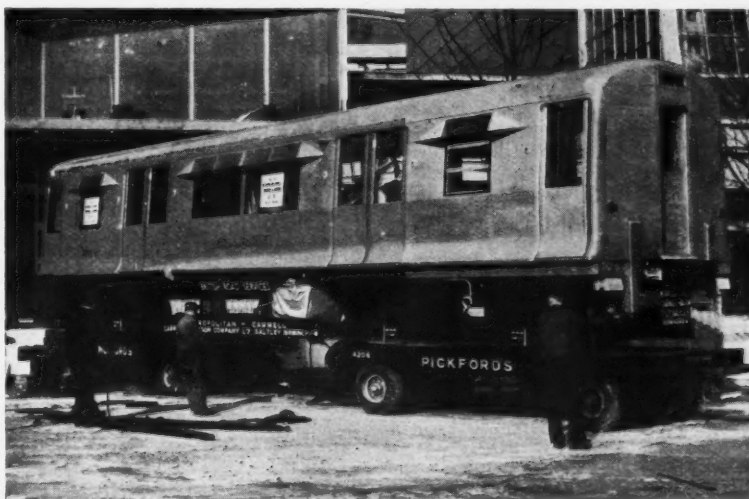
holders are to be offered 800,772 ordinary shares at £1 in the ratio of three ordinary shares for £10 of preference stock now held. It is also proposed to issue at 20s. a total of 330,760 new 4½ per cent. cumulative preference shares to the present preference stockholders only. Employers, who number more than 55,000 at the present time, will be offered 699,228 ordinary shares at 40s. a share. The annual general meeting will be held on April 3.

**Travel on Out-of-Date Tickets.**—Dismissing with costs a summons brought by London Transport against a passenger for travelling on the Underground without paying his fare, a London magistrate recently raised the question of the use by passengers of out-of-date tickets issued to them which they genuinely believed to be valid, and asked what legal protection passengers had in such a case. It was stated that the ticket given up by the passenger was four days out of date; the passenger said he had bought an early-morning ticket for the same journey daily for 14 years, and this statement was accepted by the magistrate.

**London Transport Aluminium Alloy Coach.**—A new type of lightweight Underground railway coach built of aluminium alloy is to be one of the exhibits at the Festival of Britain. Chosen by the Council of Industrial Design to represent the British carriage and wagon industry it is the first aluminium alloy railway coach of its kind to be built in this country.

Designed to be 3½ tons lighter than the present steel coaches it is the first of an order for 90 placed by London Transport. The first batch will go into service in London later this year. The exhibition car has one exterior end left unpainted and the interior finish removed to allow the method of construction to be seen. These coaches were designed to the specification of Mr. W. S. Graff-Baker, Chief Mechanical Engineer, London Transport. The car illustrated has been designed and built at the Birmingham factory of the Metropolitan-Cammell Carriage & Wagon Co. Ltd. using aluminium alloy sheets and extrusions supplied by I.C.I. Limited (Metals Division), Birmingham, and alloy castings supplied by Lightalloys Limited, Willesden.

**Timber Development Association.**—The rising prices of soft, hard, and ply woods were mentioned by Mr. G. B. Crow, Deputy Chairman of the Timber Development Association, at a cocktail party given by the T.D.A. in London on March 7. The rise, he said, was made inevitable by revaluation, increased world demand, and the rise in freights; prices would not be economic until bulk buying was abandoned. One difficulty was that the Board of Trade bought in dollar and Iron Curtain countries, and the timber trade elsewhere. Mr. Crow went on to mention increased imports this year, which probably would enable timber demands to be met in re-armament. The T.D.A. shortly would embark on a publicity campaign; now that timber exports were to increase,



London Transport aluminium-alloy coach being placed in position in the Transport Pavilion at the South Bank site of the Festival of Britain (see paragraph above)

they needed to restore to every potential user of timber the right of choice between alternative proposals after years of control.

### Developments in Passenger Vehicle Seats.

—An exhibition showing recent developments in seating for road passenger vehicles and railcars has been held this week in London by the Bus Seat Frame Association, Lombard House, 144, Great Charles Street, Birmingham, 3. The designs exhibited included both luxury and utility seating for long- or short-distance road passenger vehicles and railcars, and are the result of the pooling of the technical and manufacturing resources of member firms, which include Accles & Pollock Limited, Oldbury, Birmingham; Deans & Son (Yorkshire) Limited, Beverley, East Yorkshire; I.W.H.T. Limited (Siddall & Hilton), Sowerby Bridge, Yorkshire; and G. D. Peters & Co. Ltd., Slough.

### Forthcoming Meetings

- March 9 (Fri.).—Institution of Locomotive Engineers. Annual Luncheon at the Dorchester Hotel, Park Lane, London, W.1, at 1 p.m., reception at 12 noon.
- March 9 (Fri.).—Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.1, at 5.30 p.m. "Further Mechanical Aids for the Foundry," by Mr. A. S. Beech.
- March 12 (Mon.).—Stephenson Locomotive Society, at 32, Russell Road, Kensington, W.14, at 6.30 p.m. "Progress & Problems of British Railways," by Mr. D. S. Barrie, Public Relations Officer, Railway Executive.
- March 13 (Tue.).—Institute of Transport, Metropolitan Graduate & Student Society, at 80, Portland Place, W.1, at 5.45 for 6.15 p.m. "Permanent Way Notes," by Mr. J. A. Carey.
- March 14 (Wed.).—Railway Students' Association, London School of Economics & Political Science, Houghton Street, Aldwych, W.C.2, at 6 p.m. "The Commercial Field for the Student of Transport," by Mr. David Blee, Member, Railway Executive.
- March 15 (Thu.).—Diesel Engine Users' Association, at Caxton Hall, Caxton Street, Westminster, S.W.1, at 2.30 p.m. "Operating Experience with a 750 kW. Gas Turbine," by Mr. G. B. R. Fielden.
- March 15 (Thu.).—British Railways, Southern Region, Lecture & Debating Society, at the Chapter House, St. Thomas' Street, London Bridge, S.E.1, at 5.45 p.m. "Modern Permanent Way Practice," by Mr. L. G. B. Rock, Permanent Way Assistant, Southern Region.
- March 15 (Thu.).—British Railways, Western Region, London Lecture & Debating Society, in the Headquarters Staff Dining Club, Bishop's Bridge Road, Paddington, W.2, at 5.45 p.m. Reading and discussion of prize essay; preceded by the annual general meeting.
- March 16 (Fri.).—Institute of Transport. Annual Dinner at the Connaught Rooms, Great Queen Street, London, W.C.2, at 7 for 7.30 p.m.
- Until March 22 (Thu.).—Royal Institute of British Architects, 66, Portland Place, London, W.1. "Architecture of Transport Exhibition," open 10 a.m. to 7 p.m. weekdays, 10 a.m. to 5 p.m. Saturdays.

### Railway Stock Market

This week there have been signs of a check to the general uptrend in markets which had been in evidence since the beginning of the year. This is not surprising now that the Budget looms ahead and the recent statement by Mr. Gaitskell has emphasised the repercussions of the arms drive and the serious position arising from shortages of raw materials. There has been a tendency for buying interest to switch from industrial to commodity shares among which rubbers have been prominent. Sentiment has been affected to some extent by reports of a move in the U.S.A. to go slow with stockpiling until prices have fallen below current high levels. Industrials were not without good features in view of the dividend increases and share bonuses recently announced. Higher dividend hopes in respect of companies whose results fall to be issued later in the year are less pronounced because of fears that the Budget will bring big tax increases. Shares of locomotive builders and engineers have strengthened in price following the increased payment by Stephenson Hawthorns. There are hopes also that the new Anglo-Argentine talks may result in permission for British companies to remit home profits earned in the Argentine.

There has been only moderate business in foreign rails. Canadian Pacific has been active at over £57. At this level there is a not unsatisfactory yield of nearly 4½ per cent. based on the \$1½ dividend last year and there are reasonable possibilities of a higher payment for the current year. Moreover, Canadian issues still appear to be favoured among dollar securities, and Canadian Pacific may offer prospects of further good appreciation in price, particularly in the event of fresh oil discoveries. Nitrate Rails were 23s. 1½d. Taltal 19s., and Antofagasta ordinary and preference 7½ and 49½ respectively.

Elsewhere San Paulo 10s. units eased to 15s. 9d., Great Western of Brazil kept at 157s., and Brazil Rail gold bonds were 43½. United of Havana stocks remained more active on talk that Cuba may nationalise the railway; but there has been no news of any move suggesting any early development of this kind. The 1906 debentures were firm and have been changing hands around 19. In other directions

Bolivar "C" debentures were 57. La Guaira ordinary stock was 83 and remained firmly held as they are below their expected pay-out levels. There was again only moderate attention to Leopoldina stocks. The ordinary was 10½, the preference 27½, the 4 per cent. debentures 97, and the 6½ per cent. debentures 144. Leopoldina Terminal 5 per cent. debentures kept at 94 and the preference units at 1s. 4½d. Manila "A" debentures were 62 and the 5 per cent. preference 6s. 6d.

There were smaller irregular movements among shares of road transport companies. Lancashire Transport were 61s. 3d., and Southdown £5. West Riding eased to 49s. and the 6 per cent. preference were 21s. 3d. Maidstone & District 6½ per cent. preference have marked 22s., Birmingham & District 4½ per cent. preference up to 20s. 10½d., and Aldershot & District ordinary changed hands at close on £5½.

Engineering and allied shares again attracted a good deal of business because of higher dividend hopes. Babcock & Wilcox have firmed up to 69s. 6d. Guest Keen were 54s., T. W. Ward 66s. 6d., and Clarke Chapman 61s. 3d. The market remains hopeful of a special payment of some kind from Guest Keen, arising from compensation for nationalised steel interests, although the directors have already pointed out that the greater part of this compensation must be retained for developments at home and in Australia. Thornycroft were firm at £5 partly on continued market hopes of a bonus of some kind this year to celebrate the jubilee of the company. Cammell Laird and Vickers were both active again on expectations of increases in the forthcoming dividends; it may be some while before both companies can decide how they intend dealing with their compensation for holdings in the nationalised English Steel Corporation.

Locomotive building and kindred shares have revived, partly owing to the good Stephenson Hawthorns results, and partly on hopes of a satisfactory outcome to the latest Anglo-Argentine trade talks. Stephenson Hawthorns 5s. shares were 7s. 3d., Vulcan Foundry were 26s. 6d., and Hurst Nelson rose to 63s. 9d. on the cash payment. Birmingham Carriage were 34s. 9d., Beyer Peacock 26s. 6d., Gloucester Wagon 17s. 6d., North British Locomotive 22s. 9d., and Wagon Repairs 15s. 7½d.

Traffic Table of Overseas and Foreign Railways

Railway	Miles open	Week ended	Traffics for week		No. of week	Aggregate traffics to date				
			Total this year	Inc. or dec. compared with 1948/49		Total	Increase or decrease			
						1949/50				
South & Central America	Antofagasta ...	811	25.2.51	£ 52,740	—	£ 2,010	8	£ 693,560	+	£ 164,180
	Costa Rica ...	281	Jan., 1951	cl, 155,525	+	c391,617	31	c7,336,254	+	cl, 416,484
	Dorada ...	70	Jan., 1951	41,557	+	3,460	4	41,557	+	3,460
	Inter. Ctl. Amer. ...	794	Jan., 1951	\$1,315,344	+	\$28,708	4	\$1,315,344	+	\$28,708
	La Guaira ...	22½	Sept., 1950	\$68,726	—	\$39,529	39	\$725,535	—	\$241,943
	Nitrate ...	382	15.8.50	10,816	—	8,656	32	286,336	+	6,203
	Paraguay Cent. ...	274	23.2.51	\$206,991	+	\$56,528	34	\$6,922,921	+	\$2,085,753
	Peru Corp. ...	1,050	Jan., 1951	\$8,019,000	+	\$1,564,300	31	\$54,149,000	+	\$13,898,342
	" (Bolivian Section)	66	Jan., 1951	Bs. 14,487,000	+	Bs. 4,964,000	31	Bs. 84,401,000	+	Bs. 12,008,836
	Salvador ...	100	Dec., 1950	c246,000	—	c32,000	26	c769,000	—	c39,000
Taltal ...	154	Jan., 1951	\$1,605,891	+	\$141,383	31	\$10,862,693	+	\$1,725,484	
Canada	Canadian National <sup>*</sup>	23,473	Jan., 1951	15,636,000	+	3,955,000	4	15,636,000	+	3,955,000
	Canadian Pacific <sup>*</sup>	17,037	Jan., 1951	10,916,000	+	2,735,000	4	10,916,000	+	2,735,000
Various	Barri Light <sup>*</sup> ...	167	Dec., 1950	25,137	—	2,955	39	257,055	—	9,900
	Egyptian Delta ...	607	10.10.50	18,245	+	1,296	28	319,911	—	24,005
	Gold Coast ...	536	Dec., 1950	304,770	+	18,020	40	2,263,935	+	83,014
	Mid. of W. Australia	277	Dec., 1950	41,841	+	6,524	26	235,223	+	58,067
	Nigeria ...	1,900	Jan., 1950	502,360	+	38,978	44	5,017,814	+	266,573
	South Africa ...	13,347	3.2.51	1,883,082	+	399,832	43	75,293,212	+	10,056,150
	Victoria ...	4,744	Sept., 1950	1,729,344	+	103,977	13	—	—	—

\* Receipts are calculated at 1s. 6d. to the rupee

† Calculated at \$3 to £1